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PK-Term '99

PK-Term '99 Help

The following Help Topics are available:

Overview of PK-Term '99

For WINDOWS 95, WINDOWS 98, AND WINDOWS NT

PK-Term '99 is a 32-bit TimeWave Host mode based Terminal program. Host mode allows the TNC to communicate with computer software that is more sophisticated than standard terminal programs. PK-Term '99 takes advantage of true multi-tasking in Windows 95 and Windows NT and uses standard Windows commands for ease of use. It allows for multiple streams on multiple ports including VHF Packet , and HF Non-packet Modes . HF modes include Morse, Baudot , ASCII, AMTOR , PACTOR , NAVTEXt , FEC , and Listen AMTOR. Features of PK-Term '99 include:

- Monitor window allows you to watch traffic on the frequency
- Multi-stream multi-port. Up to 10 streams per packet port, each in a different window
- Switch between streams with a click on the
- User defined colors and fonts
- A separate window for non-packet HF modes, from Morse through NavTex at the click of a mouse
- Saves QSOs (contacts made with another

mouse

station) to a file that is compatible with Microsoft Word™

- Text and binary file transfers with YAPP. YAPP is a file transfer protocol that allows you to send binary files via the TNC.

If you are not familiar with Windows 95 and need more information on it, check your Windows help file. If you need more information on your TNC, consult your TimeWave TNC Owners Manual.

Installation of PK-Term '99

Contents of PK-Term '99 (Unless downloaded from web)

i. Five (5) 3.5" 1.44 MB Floppy Disks

ii. PK-Term '99 Manual included in the help file.

Before you begin installation you will need to call TimeWave to purchase your Activation Key and Serial Number. (Unless you want to use Demo mode).

To install PK-Term '99

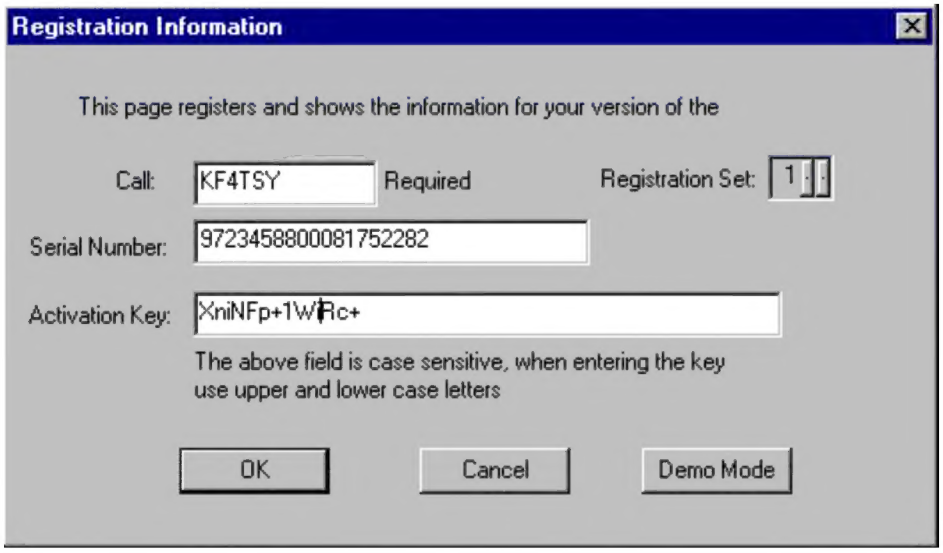
1. Place disk one (1) in drive A: (or drive B: depending on your system)
2. Click on the Start button to begin 

3. Click on the Run option
4. Type " A:\setup.exe" (or "B:\setup.exe") and press OK. This will begin the installation of PK-Term '99

5. Follow the directions for the setup. It will prompt you for information you need to complete installation.

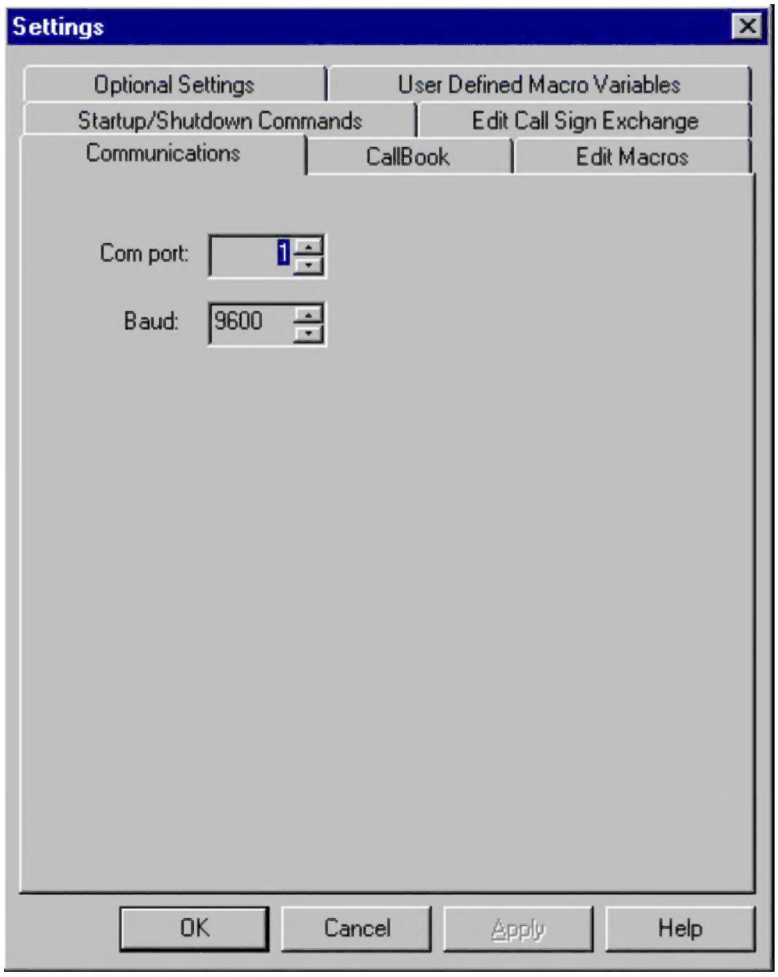
6. After installation is complete, double click on the PK-Term '99 Icon to begin the program.

7. You will be prompted to enter your Call Sign, Serial Number and Activation Key you received. You are able to register up to 10 different Call Signs. You will also need to select the registration set. The registration set is used if more than one Call Sign is used. To select which registration set to use, click on the left and right arrow keys. You will need to enter your Call Sign, Serial Number and an Activation Key to access the full capabilities of PK-Term '99. **NOTE**: Activation key **is** case sensitive.



If you don't have a Serial Number or Activation Key you will still be able to run the program, but only in Demo mode. Demo mode allows you to operate packet only using single port, multi-stream without any of the advanced features of the program. Click on the Demo mode button to continue.

8. You will be prompted to enter your computer's COM port and baud rate for the TNC. This allows you set which COM port your TNC is using, and the baud rate. PK-Term '99 supports COM1 through COM35. Make sure your TNC is connected to the COM port that you choose and the baud rate to which your TNC is set.



9. Now you are ready to begin using PK-Term '99 for Windows.

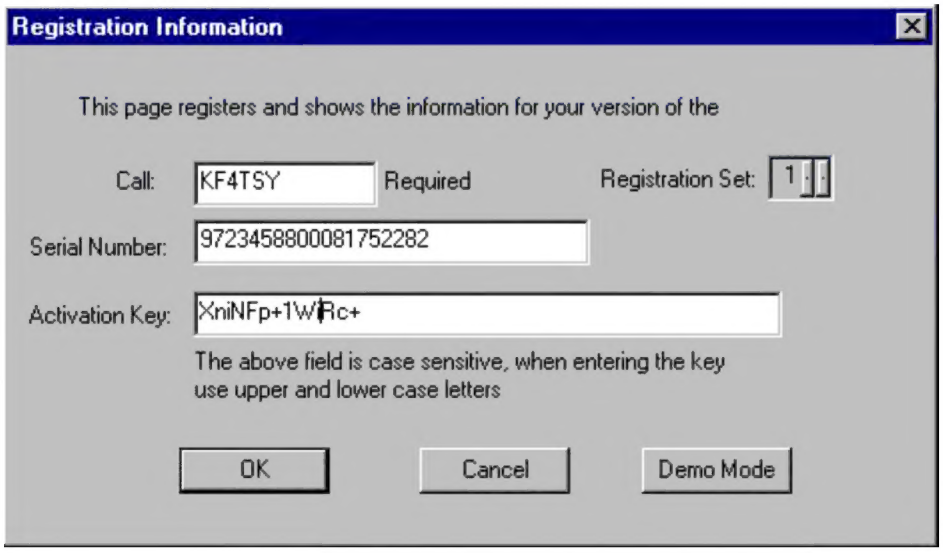
Demo Mode

Demo mode is a mode of PK-Term '99 that allows single port multiple streams in multiple windows. This mode is the free mode of the program. To access it, press the Demo mode button on the registration dialog box after you enter your Call Sign. None of the advanced features of PK-Term '99 are available in this mode, but you will be able to connect and disconnect to packet only stations by using the F2 key, which toggles command and converse mode.

Register Software

You are able to register up to 10 different Call Signs. You will also need to select the registration set. The registration set is used if more than one Call Sign is used with the program.

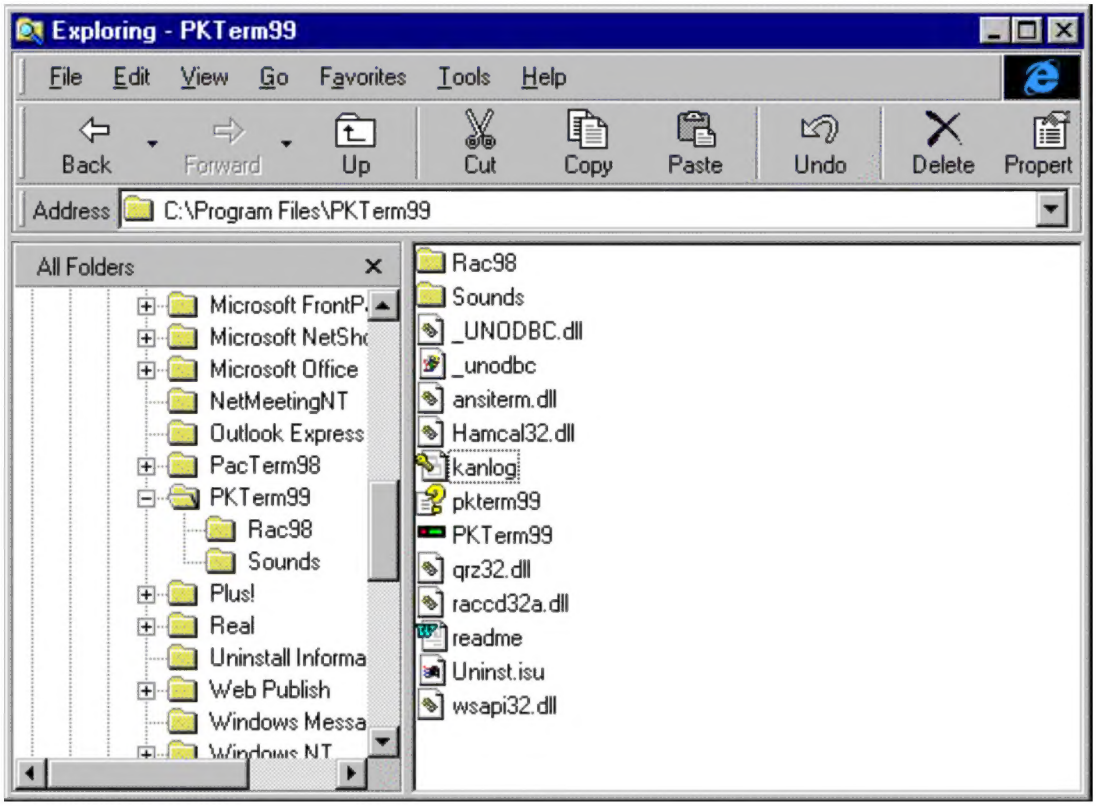
To select which registration set to use, click on the left and right arrow keys. You will need to enter your Call Sign, Serial Number, and an Activation Key to access the full capabilities of PK-Term '99. **NOTE**: Activation key **is** case sensitive.



Starting PK-Term '99 the First Time

If this is your first time using packet radio, you might want to try connecting to your own Mailbox first. After installation of the program and TNC has been completed you can start PK-Term '99 in a few different ways:

- By double clicking on the desktop icon 
- By clicking on the Start menu  . Select Programs and then click on the PK-Term '99 Icon.
- By using Windows Explorer. For more information on this, consult Windows Help .



After the program comes up, the first item you will be greeted with is a dialog box that prompts you for your Call Sign, Serial Number, and Activation Key.

If you downloaded this from the web you won't have an Activation Key or Serial Number. Just enter your Call Sign and press Demo mode. If you have an Activation Key and a Serial Number, enter them and press OK. The program will then ask for the COM port where the TNC has been

connected and the baud rate to use to communicate with the TNC. The program should now come up. If it doesn't, check information in the Troubleshooting section of this manual.

Now that you have finished entering the basic information requested, it's time to begin the program. On opening PK-Term '99 for the first time you will see a large program window near the top of your monitor. Near the bottom of the program window you will see a small chat buffer (the default color of this window is white), and a larger receive text buffer at the top (the default color of this window is blue). The bar that separates the two windows is the splitter bar, it can be moved up and down to resize the windows to your preference. **NOTE:** When making a packet connection, text you receive will appear in the text buffer. Commands and text you enter will appear in the chat buffer. All results of the commands or text entered by you will appear in the Command Window. The Monitor Window monitors the traffic on the packet radio port.

If you are using a PK 232 or a DSP 232 then when you first open PKTerm '99, neither VHF nor HF view will be open. Simply click on the file menu and choose whether you want HF or VHF View.

If you use a PK12, a PK96 or a PCB 88 then a VHF window will appear at startup. If you are using a DSP 2232 or a PK 900 then a port 2 VHF window session and a HF session window will appear at startup.

How to Report Bugs

We here at Creative Services Software have done our best to find and eliminate all bugs from our programs. If you find a problem with the software that you think may be a bug, please let us know. You can reach us at bugs@cssincorp.com.

Moving from PC PAKRATT2.0 to PKTerm '99

Operation	In PC PAKRATT	In PKTerm '98
To begin a session	Click on the TNC menu, then choose the open TNC which corresponds to your TNC	based on your TNC you may or may not have you want a HF window and it is not open then windows and click on file-->new HF non pa file-->new VHF session.
To choose a mode	click on the drop down menu that appears on the screen after you start a new session and choose you prefered mode.	when the HF Non Packet mode appears simpl mode you prefer. For a VHF mode simply go session.
call sign lookup	not supported in PC PAKRATT	simply go to the lookup menu and click looku
To enter terminal Mode.	click on the Dumb Terminal in the mode drop down menu	open a VHF window and click on mode and th
To send ASCII	Click on the Xfer button in almost any screen	in the HF and VHF click on the file transfer me
To send YAPP	not supported in PC PAKRATT	in the HF and VHF click on the file transfer me
To. Print		simply click on the print icon on the main toolb
To save your dialog		click on the icon with the disk on it. Then cho
to connect in VHF	click on the CON button. Then put the callsign of the person your connecting to then click ADD then click CON	enter the callsign in the callbar at the top of yc
To connect in HF non packet	in AMTOR mode click on the ARQ button and then enter the callsign and click add. Then click on CON. For pactor click on PACTOR CON then put in the callsign and click add the click CON	click on the LK icon on the toolbar. You only Pactor. The others are non link modes.
To transmit and receive data in Pactor and amtor	click on the Rx button to receive data and the Tx to transmit data.	In Pactor and amtor modes, once you are con data and IRS to receive data.
To transmit and receive data in non linked modes.	click on the Tx and Rx and Transmit and receive data resectively	

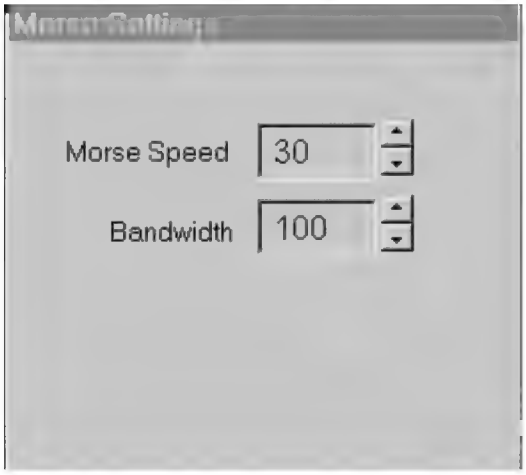
PKTerm '99 Hotspots

Here is of all the common Hotkeys that are available to make Pk-Term '99 easier to use.

Command	Hotkey
Open File	ctrl+O
Save file	ctrl+S
Print	ctrl+P
Cut	ctrl+X
Copy	ctrl+C
Paste	ctrl+V
Clear Screen	ctrl+W
Repeat last text	ctrl+R
Call Exchange	ctrl+F1
User assigned macros	ctrl+0-9
New VHF Session	ctrl+N
New HF Session	ctrl+H
Switch to ISS	F2
Switch to IRS	F3
Connect	F7
Disconnect	Shift+Alt+F7
Send Control Y	Shift+Ctrl+Y
Send Control Z	Shift+Ctrl+Z
Send Control A	Shift+Ctrl+A
Send Command	F10
Transmit	F4
Receive	F5

Using the PK-900

If you are using the Pk-900 DSP then you will also have an option to change the Morse Bandwidth in the Morse menu of the HF non-packet session window. With this setting you have 3 options: 50, 100, 200, and Qmorse. The lower the bandwidth the better the reception but the more difficulty you will experience tuning.



When you change the Bandwidth setting for your PK-900 DSP, the 3 settings change between 3 different CW Modems. The 50 bandwidth is Modem 14, the 100 Bandwidth is modem 13, and the 200 bandwidth is modem 12.

If you want to use the default CW modem you specified in the Modems settings screen choose Qmorse. For more information on Modems go here

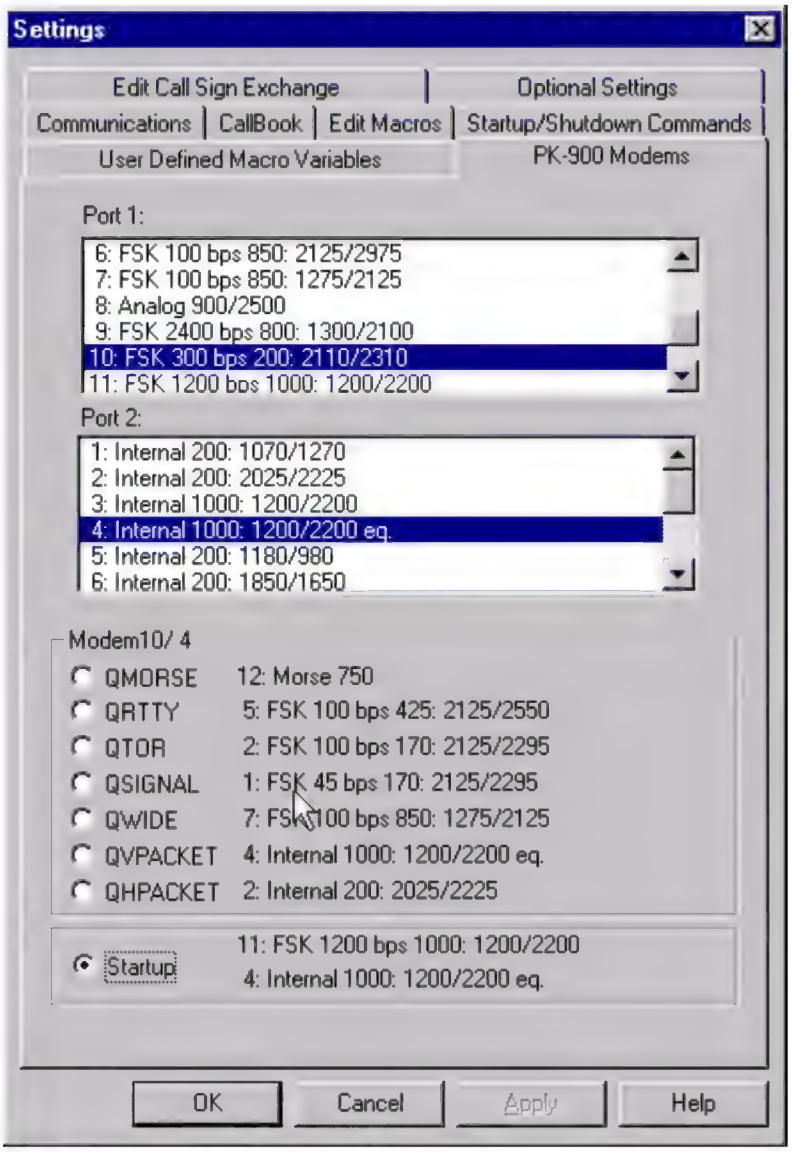
Selecting a Modem

In Version 1.3 Of PKTerm '99, you will be able to change the modem that want to you for each mode. The TNCs that will be able to change their modems are the DSP-232, PK-900 and PK-900 DSP, DSP 1232 and the DSP-2232. Different Modems will allow you to achieve higher baud rates and change the setting that you would normally have to use with the default modem. Each Mode, whether in Packet or Non-Packet, has Modems you can set as default for each mode of transfer (one for VHF Packet, HF Packet, Baudot, Morse, pacTOR, amTOR, etc.). You can also select a Default start modem for when PKTerm '99 starts.

When PKTerm '99 loads the first time after you install Version 1.3, PKTerm '99 will retrieve a list of the modems that your TNC has. This process takes anywhere from 30 seconds to 2 minutes depending on the speed of your computer and the baud rate you have your serial port set to. PKTerm should only retrieve this list the first time you run it after installing Version 1.3, and whenever you change TNCs or change the firmware on your TNC.

When using a PK-900 DSP, when you choose a default modem that you would like to use for Morse you must first go to the HF Non-Packet settings, then choose the Morse Tab. Then under CW Bandwidth you must change that to Qmorse, otherwise the setting you choose under CW Bandwidth will override your chosen default modem.

Because of the way that the PK-900 Firmware was written, if you are using a PK-900 you will see a different screen than if you were using a DSP-232, DSP 1232 or the DSP-2232.

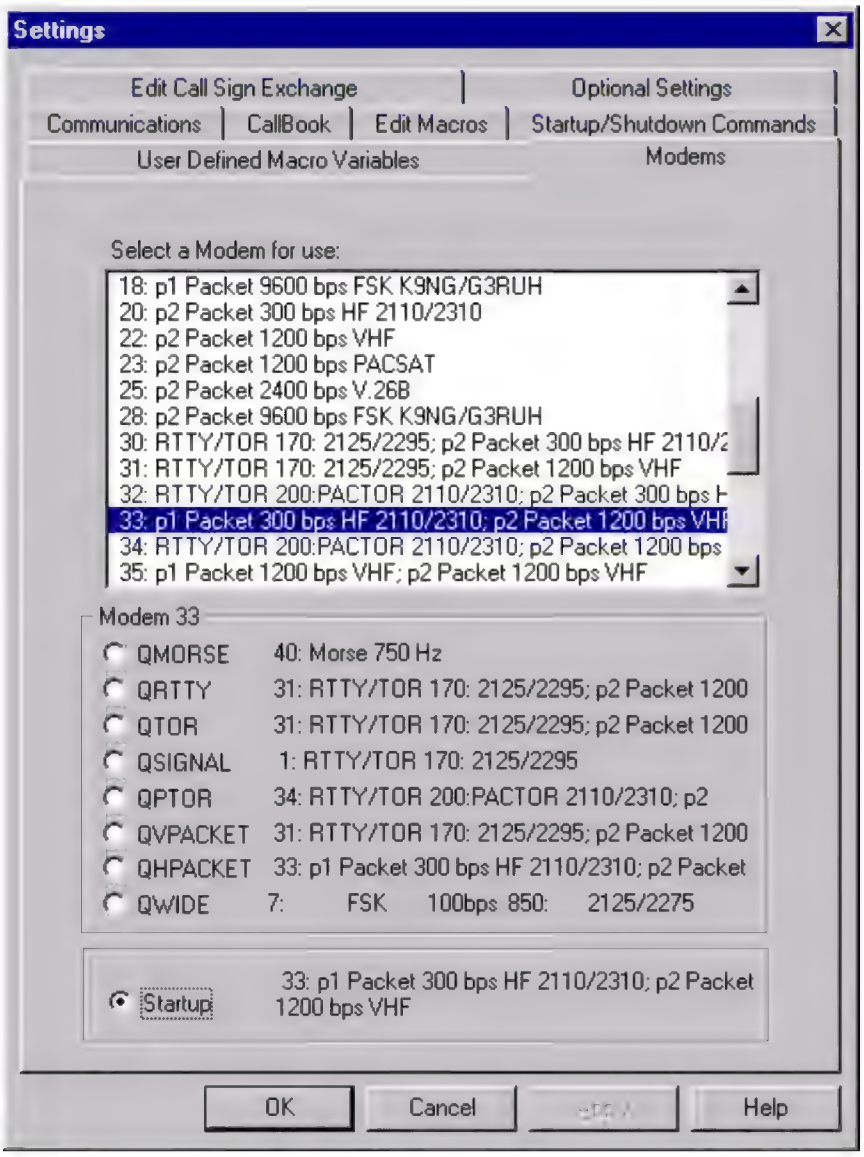


If you are using a Pk-900 or any other TNC that has Modems in them, then you will see an additional tab in the Settings window. If you are using a TNC with no Modems then you will not see this tab and PK-Term will function like normal.

When using a PK-900 and choosing a modem, you must remember that Port 1 is HF Non-Packet and VHF Packet. Port 2 is HF and VHF Packet. When selecting a modem, simply choose the mode you want to change the modem on. For example: in the picture above, the Qmorse Modem is set to Modem 12. That means that when you change to Morse Mode in the HF Non-packet Session window, PKTerm '99 will automatically change the modem to the one you selected, in this case modem 12. If you want to change the modem that a mode uses simply pick a mode to change and then select a modem from the list. If you are choosing a modem for VHF or HF Packet then you can choose from either port. If you are choosing a modem for a HF Non-Packet mode then the Port 2 box will be grayed out. The default Modems for each Mode are the

recommended Modem for that particular mode. If you want more information on selecting the right modem for you, consult your TNC manual under the modems command.

When you are using a DSP-232, DSP 1232 or the DSP-2232 you will see a screen like this



The Following will illustrate which TNC supports which Qcommand. The TNCs will have an 'X' next to the command that it supports.

QCOMMAND	DSP-232	PK-900	DSP-2232	DSP-2232
QHPACKET				X X X X
QMORSE	X	X	X	X

QPTOR	X			X			
QRTTY	X		X	X		X	
QSIGNAL(SIAM)		X		X		X	X
QTOR	X		X	X		X	
QVPACKET	X		X	X		X	
QWIDE	X		X				

The Wideshft command runs QWIDE. Loading the default modem you have set for you DSP-232 or PK-900. This command is mainly used by some MARS stations that use 850 RTTY on HF and by some VHF data repeaters. To use Wideshft simply type the command at the command prompt(F2 in the packet window or in the command window).

The following is a complete listing of the modems available on the EPROM of the PK-900, DSP-2232, DSP-1232, and the DSP-232. For all these TNCs the following list gives a general idea of which modem is used for which mode by the numbers.

01-09: RTTY/TOR

10-19: Port 1 Packet General Purpose

20-29: Port 2 General Purpose

30-39: Dual Port Modems

40-49: Morse, Analog, DSP data and other modes

50-59: Port 1 Special Purpose

60-69: Port 2 Special Purpose

70-255: Reserved

```
PK-900 modem directory:

  - Port 1 -                          - Port 2 -

 1: FSK 45 bps 170: 2125/2295        1: Internal 200: 1070/1270

 2: FSK 100 bps 170: 2125/2295       2: Internal 200: 2025/2225
```

```
 3: FSK 45 bps 200: 2110/2310       3: Internal 1000: 1200/2200

 4: FSK 100 bps 200: 2110/2310      4: Internal 1000: 1200/2200 eq.

 5: FSK 100 bps 425: 2125/2550      5: Internal 200: 1180/980

 6: FSK 100 bps 850: 2125/2975      6: Internal 200: 1850/1650

 7: FSK 100 bps 850: 1275/2125      7: Internal 800: 2100/1300

 8: Analog 900/2500                 8: Internal 800: 2100/1300 eq.

 9: FSK 2400 bps 800: 1300/2100     9: Internal option

10: FSK 300 bps 200: 2110/2310      10: Modem disconnect header

11: FSK 1200 bps 1000: 1200/2200

12: Morse 750



DSP-2232 modem directory:

  (930315)

  1: RTTY/TOR 170: 2125/2295                  2: RTTY/TOR 170:
1445/1275

  3: RTTY/TOR 425: 2125/2550                  4: RTTY/TOR 850:
2125/2975

  5: RTTY/TOR 200: PACTOR 2110/2310           6: RTTY/TOR 200: PACTOR
1460/1260

 10: p1 Packet 300 bps HF 2110/2310           11: p1 Packet 300 bps HF
1460/1260

 12: p1 Packet 1200 bps VHF                   13: p1 Packet 1200 bps
PACSAT

 14: p1 Packet 1200 bps PSK                   15: p1 Packet 2400 bps
V.26B

 16: p1 Packet 4800 bps PACSAT                17: p1 Packet 4800 bps
PSK

 18: p1 Packet 9600 bps FSK K9NG/G3RUH        20: p2 Packet 300 bps HF
2110/2310

 22: p2 Packet 1200 bps VHF                   23: p2 Packet 1200 bps
PACSAT

 25: p2 Packet 2400 bps V.26B                 28: p2 Packet 9600 bps
FSK K9NG/G3RUH

 30: RTTY/TOR 170: 2125/2295; p2 Packet 300 bps HF 2110/2310
```

```
 31: RTTY/TOR 170: 2125/2295; p2 Packet 1200 bps VHF

 32: RTTY/TOR 200:PACTOR 2110/2310; p2 Packet 300 bps HF 2110/2310

 33: p1 Packet 300 bps HF 2110/2310; p2 Packet 1200 bps VHF

 34: RTTY/TOR 200:PACTOR 2110/2310; p2 Packet 1200 bps VHF

 35: p1 Packet 1200 bps VHF; p2 Packet 1200 bps VHF

 40: Morse 750 Hz                              41: Analog FAX HF

 42: Analog FAX APT                            43: Analog SSTV

 44: DSP data 400 bps OSCAR-13                 45: RTTY/TOR 1200 bps
ASCII OSCAR-11

 46: DSP data Spectrum                         50: p1 Packet 1200 bps
MSK

 51: p1 Packet 2400 bps MSK                    60: p2 Packet 1200 bps
MSK

 61: p2 Packet 2400 bps MSK
```

DSP-232 modem directory:

(960717)

1: RTTY/TOR 170, 45 bps (2125/2295)

2: RTTY/TOR 170, 100 bps (2125/2295)

3: RTTY/TOR 170, 45 bps (1615/1785)

4: RTTY/TOR 170, 100 bps (1615/1785)

5: RTTY/TOR 200, 200 bps (2110/2310)

6: RTTY/TOR 200, 200 bps (1600/1800)

7: RTTY/TOR 425, 200 bps (2125/2550)

8: RTTY/TOR 425, 200 bps (1275/1700)

9: RTTY/TOR 850, 200 bps (2125/2975)

10: Packet/HF 300 bps (2110/2310)

11: RTTY/TOR 850, 200 bps (1275/2125)

12: Packet/VHF 1200 bps (1200/2200)

13: Packet/HF 300 bps (1600/1800)

14: PACSAT BPSK 1200 bps (Manchester)

15: AEA FAX APT AM (2400)

16: Analog FAX APT AM (2400)

17: Analog FAX FM (1500/2300)

18: Packet 9600 bps (K9NG/G3RUH)

19: AEA FAX FM Zero Xing (1500/2300)

20: Morse CW (750)

21: 400 bps telemetry demodulator

22: RTTY/TOR 170, 45 bps (1445/1275)

23: RTTY/TOR 170, 100 bps (1445/1275)

24: RTTY/TOR 200, 200 bps (1460/1260)

25: Packet/HF 300 bps (1460/1260)

DSP-1232 Modem Directory:

(920723)

1: RTTY/TOR 170: 2125/2295

2: RTTY/TOR 170: 1445/1275

3: RTTY/TOR 425: 2125/2550

4: RTTY/TOR 850: 2125/2975

10: Packet 300 bps HF 2110/2310

11: Packet 300 bps HF 1460/1260

12: Packet 1200 bps VHF

13: Packet 1200 bps PACSAT

14: Packet 1200 bps PSK

15: Packet 2400 bps V.26B

16: Packet 4800 bps PACSAT

17: Packet 4800 bps PSK

18: Packet 9600 bps FSK K9NG/G3RUH

40: MORSE 750 Hz

41: Analog FAX HF

42: Analog FAX APT

43: Analog SSTV

44: DSP Data 400 bps OSCAR-13

45: RTTY/TOR 1200 bps ASCII OSCAR-11

46: DSP Data Spectrum

50: Packet 1200 bps MSK

51: Packet 2400 bps MSK

52: Packet 9600 bps G3RUH J022 eq

Windows Commands

Windows Help

For more information on Windows 95 help, click here.

Help Topics

PK-Term '99 Help is your online help.

Open File Command

Use this command to open a document with Word pad.

Shortcuts

Toolbar: 

Keys: CTRL+O

Close Command

Use this command to close the current session. You can also close a session by using the Close icon on the document's window, as shown below:

Save Command

Use this command to save the current active session. When you save a document, PK-Term '99 displays the Save as dialog box so you can name your document.

Shortcuts

Toolbar: 

Keys: CTRL+S

Save As Command

Use this command to save and name the active session. PK-Term '99 displays the Save as dialog box so you can name your document. It can be saved in Rich Text Format (.RTF) or Text Format (.txt) format.

Print

Use this command to print a session. This command presents a Print dialog box where you may specify the range of pages to be printed, the number of copies, the destination printer, and other printer setup options.

Shortcuts

Toolbar: 

Keys: CTRL+P

Print Preview

Use this command to display the active session as it would appear when printed. When you choose this command, the main window will be replaced with a print preview window in which one or two pages will be displayed in their printed format. The print preview toolbar offers you options to view either one or two pages at a time; move back and forth through the document; zoom in and out of pages; and initiate a print job.

Print Dialog Box

The following options allow you to specify how the document should be printed:

Printer

This is the active printer and printer connection. Choose the Setup option to change the printer and printer connection.

Setup

Displays a Print Setup dialog box , so you can select a printer and printer connection.

Print Range

Specify the pages you want to print:

A Prints the entire document.
ll

Selection Prints the currently selected text.

Pages Prints the range of pages you specify in the From and To boxes.

Copies

Specify the number of copies you want to print for the above page range.

Collate Copies

Prints copies in page number order, instead of separated multiple copies of each page.

Print Quality

Select the quality of the printing. Generally, lower quality printing takes less time to produce.

Print Progress Dialog

The Printing dialog box is shown during the time that PK-Term '99 is sending output to the printer. The page number indicates the progress of the printing.

To abort printing, choose Cancel.

Print Preview Toolbar

The print preview toolbar offers you the following options:

Print

Bring up the print dialog box, to start a print job.

Next Page

Preview the next printed page.

Prev Page

Preview the previous printed page.

One Page / Two Page

Preview one or two printed pages at a time.

Zoom In

Take a closer look at the printed page.

Zoom Out

Take a larger look at the printed page.

Close

Return from print preview to the editing window.

Print Setup

The following options allow you to select the destination printer and its connection.

Printer

Select the printer you want to use. Choose the Default Printer; or choose the Specific Printer option and select one of the current installed printers shown in the box. You install printers and configure ports using the Windows Control Panel.

Orientation

Choose Portrait or Landscape.

Paper Size

Select the size of paper that the document is to be printed on.

Paper Source

Some printers offer multiple trays for different paper sources. Specify the tray here.

Options

Displays a dialog box where you can make additional choices about printing, specific to the type of printer you have selected.

Network...

Choose this button to connect to a network location, assigning it a new drive letter.

Cut Command

Use this command to remove the currently selected data from the session and put it on the clipboard. This command is unavailable if there is no data currently selected. You cannot cut data from the (blue) receive text window because this is a read only window. You can cut text from the (white) chat window. **NOTE**: These are the default color and can be change by the user.

Cutting data to the clipboard replaces the contents previously stored there.

Shortcuts

Toolbar: 

Keys: CTRL+X

Copy Command

Use this command to copy selected data onto the clipboard. This command is unavailable if there is no data currently selected.

Copying data to the clipboard replaces the contents previously stored there.

Shortcuts

Toolbar: 

Keys: CTRL+C

Paste Command

Use this command to insert a copy of the clipboard contents at the insertion point. This command is unavailable if the clipboard is empty.

Shortcuts

Toolbar: 

Keys: CTRL+V

Cascade Command

Use this command to arrange multiple opened windows in an overlapped fashion.

Tile Command

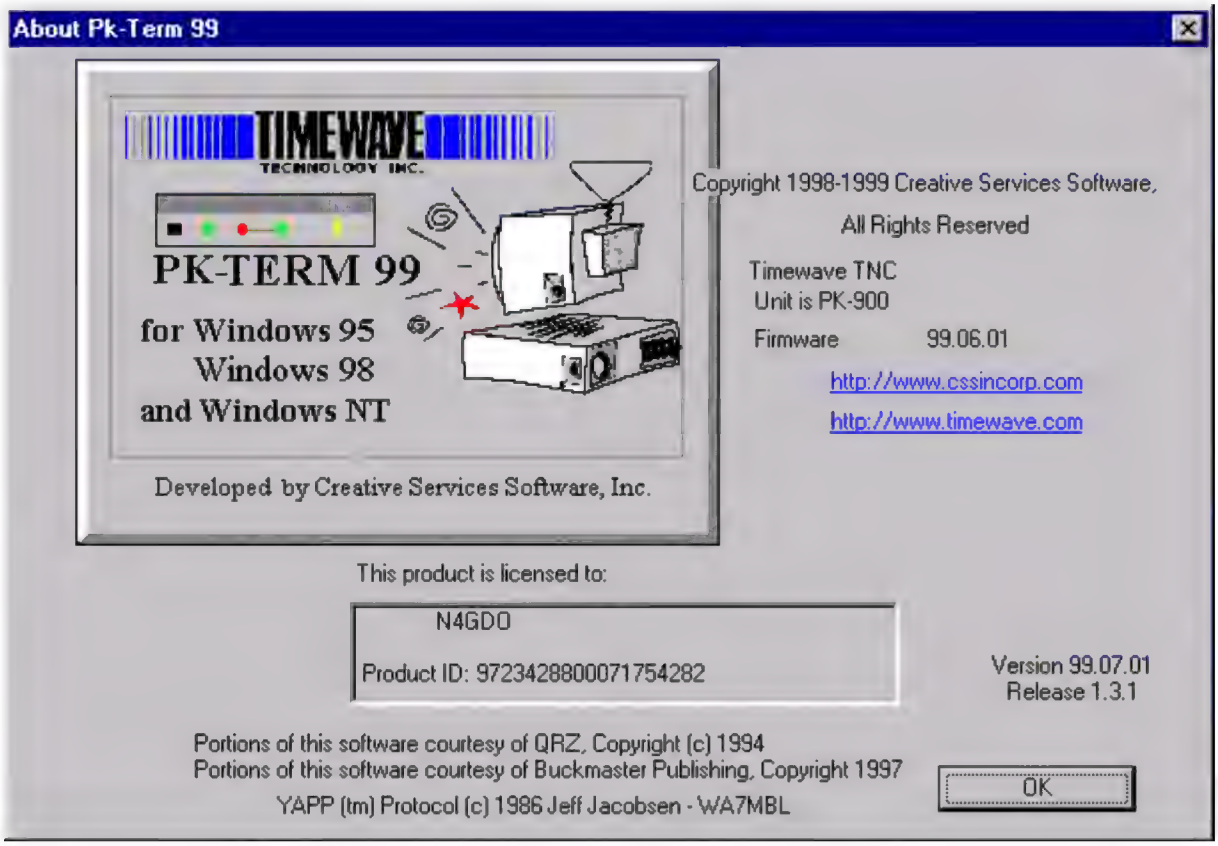
Use this command to arrange multiple opened windows in a non-overlapped fashion.

Arrange Icons

Use this command to arrange the icons for minimized windows at the bottom of the main window. If there is an open document window at the bottom of the main window, then some or all of the icons may not be visible because they will be underneath this document window.

About Box

The About box tell you who the software is licensed to, what model of TimeWave TNC is attached, and the version of Firmware the TNC has, and the software version.



Exit

From the Packet window, the Exit command exits from the program. If you have any open windows (connected to a packet station) they will not be disconnected when you exit. You will need to disconnect before Exiting from the HF Window.

Status Bar

VHF Status Bar

The status bar is displayed at the bottom of the PK-Term '99 window. To display or hide the status bar, use the Status Bar command in the View menu.

The following is a description of each part of the status bar:

A. Emulates the TNC cmd: Converse mode by pressing F2.

B. Shows which Port and Stream the session is using.

C. Connection status.

D. Press F1 for Help.

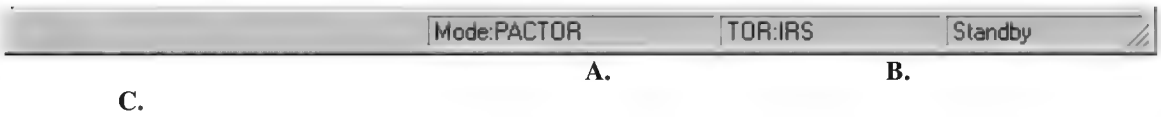
E. Lists the current mode, Host or Terminal.

F. Local time

G. UTC (GMT)

H. Free bytes in the TNC's buffer.

Non-Packet HF Status Bar



A. Shows which Non Packet mode your are using.

B. Additional information about that mode.

C. TNC status.

Toolbar

This is the VHF Toolbar:

This is the HF Toolbar:

The toolbar is displayed across the top of the application window, below the menu bar. The toolbar provides quick mouse access to many tools used in PK-Term '99 and to the HF modes in the TNC.

To hide or display the Toolbar, choose Toolbar from the View menu (ALT, V, T).

Click	To
	Open a new session.
	Open an existing document. PK-Term '99 displays the Open dialog box, in which you can locate and open the desired file.

Save the active session with its current name. If you have not named the document, PK-Term '99 displays the Save As dialog box.

Print the active session.

Remove selected data from the session and stores it on the clipboard.

Copy the selection to the clipboard.

Insert the contents of the clipboard at the text cursor.

Use this Icon to Sync PK-Term '99 with Log Windows

General Information

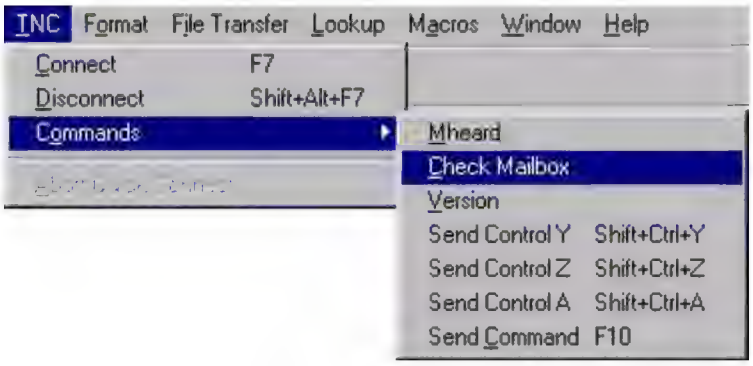
Entering Your Selcal

This unique character sequence contains four alphabetic characters that are derived from your call sign. The TNC will automatically do this for you just by entering your amateur callsign into the MYSELCAL command.

Because the same call sign sequences are assigned in ten districts, it is possible that your SELCALL could be used by another station. If you think a station in another call district is also active on AMTOR and is using the same SELCALL, see the MYSELCAL command in the manual for information on how to change your Selcall.

Connecting to your own Mailbox

TNCs offer an inboard mailbox to receive mail. You can use PKTerm '99 to check this maildrop. Simply click on the TNC Menu at the top of you screen and when the dropdown Menu appears move your mouse over Command. When another sideways menu appears simply click on Check Mailbox Option



For more Information on how your mailbox works see MailDrop Operation

Understanding the HF TOR Modes

To monitor AMTOR or PACTOR transmissions, you will have to enter a monitor mode. For example, to listen to PACTOR link requests or a QSO in PACTOR, you would click on the PACTOR listen button or choose PACTOR from the mode menu.

To break a link (finish the QSO), you would click on Disconnect in the appropriate menu to abort the link or quit the TOR mode.

If the station you are monitoring is calling CQ and you wish **to make contact**, you will then issue a link request, again with a command specific to that mode. For example, suppose you hear N4GDO calling CQ in PACTOR. To link with him, you would click the link option in the AMTOR menu and type in N4GDO and hit Enter. Or click on  .

If you wanted to call CQ yourself, you would enter Standby mode for AMTOR by clicking on the  button on the toolbar and then click on the  icon, or press F4, to make your radio transmit. Then type your CQ message:

CQ CQ CQ DE "your Call Sign" K.

You may repeat that line several times. Then, put your controller in Standby (and return the radio to Receive mode), by clicking on  button or pressing F5.

You are now ready to take on Solar Cycle 23 and operate one of the TOR modes. Good hunting.

Information transmitted by AMTOR is specially encoded to provide a scheme of error detection. This coding takes the form of each character containing 4 SPACE signals and 3 MARK signals. The receiving station can use this 4/3 ratio to determine if the character received is "probably" correct. If the received signal were to arrive with 4 MARK and 3 SPACE signals, the signal is obviously in error, and the receiving station could take the appropriate action.

The information is transmitted in blocks of 3 characters; that is, the sending station will transmit 3 characters and then pause for an answer from the receiving station. The answer will consist of a single character, indicating that the block just sent was either received OK or that the block should be retransmitted.

AMTOR operation is possible in two basic modes. Mode A operation is a one-on-one mode, enabling the receiving station to request retransmission of any characters received which contain errors. This mode provides a high degree of error immunity due to the handshaking between the two stations involved in the communication. This mode is commonly referred to as ARQ.

Mode B operation is similar to Baudot RTTY operation, in that the signals are not error-checked by a specific station and no handshaking is performed. Mode B is the mode used for calling CQ, or other operations, where more than one station is intended to receive the communication. Mode B operation is called FEC -- Forward Error Correction. In this mode, each character is sent twice, and the receiving stations will check each character for the proper 4/3 ratio. If the first character received is correct, the receiving station stores it and then looks at the repeat of that character. If it is also correct and it matches with the first character, it is printed. If one of the two was correct and the other did not have the proper MARK/SPACE ratio, the correctly received character is printed. If both characters were received incorrectly, then the ERRCHAR is printed. If both were received correctly, but they don't match, the ERRCHAR is also printed.

A variation of mode B operation is called SELFEC -- Selective FEC. In this mode, the sending station transmits the SELCAL of the intended receiving station for a specific time interval. During this time, all stations that hear the signal compare the SELCAL being received with their own SELCAL. If they match, then the printing of data is enabled. Otherwise the receiving station returns to a standby mode and doesn't copy the signal. In addition, when the sending station starts to transmit the data, it automatically inverts the MARK and SPACE tones, resulting in four MARKs and three SPACEs. Other stations that tune in during the SELFEC transmission cannot lock to this signal.

AMTOR stations are each identified with a SELCAL -- the selective Call Sign used to identify this station from all others. In most other amateur communication, we think of the Call Sign being used for this purpose, but in AMTOR, the SELCAL is normally composed of the first

letter of your call and the last three letters of your call. Thus the SELCAL for KF4WGU would be KWGU. If your Call Sign does not contain four letters, the standard practice is to duplicate the first letter of the SELCAL. Thus W4RJ would have a SELCAL of WWRJ. The SELCAL is used in both the SELFEC and ARQ modes of operation.

With the implementation of the CCIR 625 recommendation for AMTOR operation, the SELCAL may now contain 7 characters. This SELCAL cannot include the characters G, H, J, L, N, and W. The reasons for this are contained in the Consultive Committee on International Radio document "CCIR Recommendation 491-1" which describes a TOR station identity.

AMTOR ARQ (mode A) operation requires that both stations transmit alternately. First the Information Sending Station (the station actually sending data) sends three characters. This requires 210 milliseconds. This station then enters the receive mode and it listens for the acknowledgment from the Information Receiving Station. The sending station will wait 240 milliseconds for acknowledge. After this 240 millisecond delay, the sending station will again enter transmit and send the next (or the same) three characters.

Since both stations are constantly switching from receive to transmit and back again, fast switching times are required for AMTOR ARQ operation. You can adjust ADELAY to allow for the time required for your station to change from receive to transmit, but you should allow a small extra amount of time for the other station to switch from transmit to receive. Regardless of the setting of this parameter, the total turn around time for one AMTOR data/ack cycle remains 450 milliseconds.

AMTOR Information

AMTOR is one of three teletype over radio (TOR) modes. Operationally, AMTOR and PACTOR are similar. Commands exists in each mode for monitoring (other stations), for standby (to receive a link request), and for initiating a link (connect).

Action	**Command**
To monitor AMTOR or (SITOR)	use 
To receive a linked request or	use 
Go to AMTOR standby to call CQ	
To initiate a link	use 

To listen to AMTOR activity or to make an AMTOR contact using PK-Term '99, start by opening a HF non-packet session using the pull-down File menu.

LAMTOR: Once the screen is opened, click on  on the toolbar to enter the Listen AMTOR (monitor) mode. Once the TNC is set, LAMTOR will appear on the status bar at the bottom on the HF screen (just above the task bar). To monitor (copy other stations), tune your receiver (LSB for amateur operations, USB for some commercial services) until the MARK and SPACE tones light both ends of the TNC bar graph. To quit LAMTOR, simply click on another mode or close the HF window.

You are set to receive a link request from another station or you may click on  to initiate a link. (For commercial SITOR operations, tune in the bar graph when a transmission is heard to see if it is a "free" signal).

AMTOR: To make an AMTOR connect, click on  (if not in that mode already) and then click on  . A menu will then appear for you to enter the SELCAL of the station you wish to contact. Phasing to link (connect) follows.

TO BREAK THE LINK: Click on "D"

SENDING TO RECEIVING DATA WHILE IN AMTOR: The station that initiates the AMTOR link starts as the information sending station (ISS)  . The station receiving a link request and linking starts as the information receiving station (IRS)  . As ISS you may send information by typing test on the type-ahead line (window) which is immediately below the text window and above the status bar. Once you have finished typing what you wish, you can press either the ISS or the IRS button to change to information direction (OPTIONAL: you can also type a "+" and a "?" to cause the AMTOR link to change information direction. Once you have done that, the link will sound different and your status bar will reflect your station as IRS. You can capture status as ISS by once again typing "+" and a "?". To type in text, you must place your cursor on the type-ahead line.)

To call CQ click on  . After you are in AMTOR standby mode, click on  to call CQ, then click on the "R" to return to AMTOR standby, ready to be linked to.

Morse Operation

The TNC will both send and receive International Morse Code. The computer based Morse operator can use the TNC to send "perfect" code at much higher speeds than are typical of hand sent code. When a computer is used to send and receive Morse Code, you can also maintain a record of your contacts.

Before you operate Morse, you must first know where the activity is. Morse operation is permitted on any amateur frequency, but most often occurs in the lower 100 to 250 kHz of a band.

AMTOR Operation

AMTOR has two basic modes of operation, mode A (ARQ – Automatic ReQuest for Reception) and mode B (FEC – Forward Error Correction).

- ARQ AMTOR is a handshaking protocol that allows only two stations to communicate in a near error free fashion. You will hear a "chirp chirp" sound when you find two stations conversing in ARQ. AMTOR mode A (ARQ) is perhaps the most error-free method of getting messages through on HF when conditions are poor.
- FEC AMTOR is similar to Baudot RTTY and is used to call CQ or to carry on "round table" contacts.

NAVTEX is a form of FEC AMTOR that is used to send navigational bulletins and weather information primarily to ships at sea. It has been adopted by the ARRL to send bulletins to amateurs.

Before you can operate AMTOR, you must first know where the activity is. Most AMTOR operation occurs on the 20-meter amateur between 14.065 and 14.085 MHz. AMTOR activity can be found on the other HF amateur bands as well and is most often located between 65 and 90 kHz up from the bottom of the band as it is on 20 meters.

PACTOR Operation

PACTOR is a relatively new amateur data communications mode. It was developed in Germany by Hans-Peter Helfert, DL6MAA and Ulrich Strate, DF4KV. PACTOR combines some of the best features of both AMTOR and packet as well as providing a few new features. PACTOR operates at 100 bps or 200 bps depending on radio conditions. PACTOR also contains a 16 bit CRC to provide near error-free operation, as does packet and can also selectively use a data compression scheme (Huffman encoding) to increase the throughput when transmitting text. PACTOR uses an 8-bit word, allowing the use of the full ASCII character set.

When data blocks are repeated in the case of an error, the receiving unit can often combine the information in the repeated blocks to provide a good block without the need of receiving a perfect block. This scheme is called memory ARQ.

Like AMTOR and packet, PACTOR has two basic modes of operation, an ARQ mode (Automatic ReQuest for reception) and a non-linked mode used for CQ calls and round table operation.

- ARQ PACTOR is a handshaking protocol that allows two stations to communicate in a near error-free fashion. When listening to an ARQ PACTOR communication, you will hear a 0.96 second burst of data from the information sending station followed by a short burst from the data receiving station that is an acknowledge (ACK) or non-acknowledge (NAK). The NAK is sent by the receiving station when the CRC indicates an error in the data block. Like packet, PACTOR is mark-space polarity independent. The PACTOR protocol alternates the data polarity with every transmission.

- The unproto (col) mode of operation is a non-linked type of operation. It is used for round table operation or for calling CQ. The unproto mode repeats the data blocks a selectable number of times and can use either 100 or 2oo bps. It also uses the CRC error check.

Before you can operate PACTOR, you must first know where the activity occurs. Most PACTOR operation occurs on the 20-meter amateur band between 14.065 and 14.085 MHz. PACTOR activity can be found on the other HF amateur bands as well and is most often located between 65 and 90 kHz up from the bottom of the band as it is on 20 meters. On 80 meters, most PACTOR will be found between 3660 and 3690 kHz. PACTOR is not sensitive to the sideband used, but we recommend using LSB as in RTTY and AMTOR operating modes.

MailDrop Operation

The MailDrop is a small, personal mailbox that uses a subset of the well-known WORLI/WA7MBL packet BBS commands to allow messages to be automatically sent and received. The MailDrop operates in the Packet, AMTOR, and PACTOR modes. When your MailDrop is active, distant stations can connect to your TNC, leave messages for you or read messages from you. If the parameter 3RDPARTY is ON, then any station may leave a message for any other station.

The MailDrop also supports forwarding of Packet messages if properly coordinated with a local "full service" BBS. Hierarchical message addressing is now supported to simplify the routing of both national and international traffic.

When operating in Packet, your MailDrop can have its own callsign that you enter with the MYMAIL command. If you do not enter a callsign in MYMAIL, the MailDrop will use MYCALL when it is enabled. When operating the MailDrop in AMTOR, your 4 character MYSELCAL or 7 character MYIDENT is used and must be entered to access the MailDrop.

Set MAILDROP to ON to start Packet MailDrop operation (default is OFF). This command activates or deactivates your Packet MailDrop. Set TMAIL ON to start AMTOR MailDrop operation. Again, the default is OFF.

Baudot Operation

Baudot has been around for many years. The five bit Baudot/Murray code was the basis of the Western Union Telex service and Baudot RTTY (Radio TeleTYpe) is still widely used on the HF amateur bands. The Baudot character set contains the upper-case letters, the numbers 0-9 and some common punctuation characters. Because Baudot has only five bits, it is less prone to errors than seven bit ASCII. Your TNC provides Baudot RTTY at all the standard speeds in use today, including all commercial speeds up to 300 baud.

Before you can operate Baudot, you must first know where the activity is. Most RTTY operation occurs on the 20-meter amateur between 14.08 and 14.10 MHz. RTTY activity can be found on the other HF amateur bands as well and is most often located between 80 and 100 kHz up from the bottom of the band as it is on 20 meters.

NAVTEX Operation

NAVTEX is an international system, which stands for NAVIGATIONAL TELEX. It is a direct printing service designed to distribute navigational and meteorological warnings and other urgent information to ships. To enter the NAVTEX mode, simply click the 

button.

The ARRL has also adopted this format for transmitting bulletins. In amateur radio this same format is starting to be referred to as AMTEX. AMTEX transmissions can be found on ARRL bulletin frequencies.

NAVTEX is broadcast in mode B AMTOR (SITOR) on a frequency of 518 kHz. NAVTEX may be selectively monitored, so you will see only information of interest and never see the same message twice.

ASCII RTTY Operation

ASCII, the American Standard Code for Information Interchange, has been around for nearly 30 years. ASCII is a 7-bit code and was designed to overcome the limitations of the Baudot character set by including both upper and lower case letters, numbers, all punctuation as well as many computer control codes. ASCII is not so popular on the amateur bands, but its operation is almost identical to Baudot RTTY.

Before you can operate ASCII RTTY, you must first know where the activity is. Most RTTY operation occurs on the 20-meter amateur between 14.08 and 14.10 MHz. RTTY activity can be found on the other HF amateur bands as well and is most often located between 80 and 100 kHz up from the bottom of the band as it is on 20 meters.

SELCAL

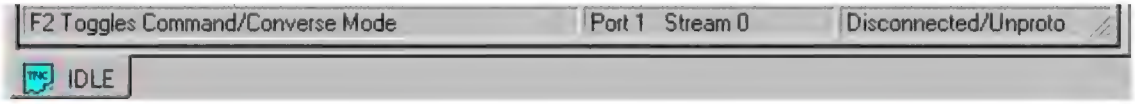
SELCAL is an acronym for Selective Call. SELCAL is derived from your Call Sign. As a general rule your AMTOR SELCAL consists of the first letter in your Call Sign and the last three letters of your Call Sign. To change your SELCAL consult your TNC Manual.

View Tabs and Call Bars

A few new Items have been added to PKTerm '99 to make it more convenient and user friendly.

The Call Bar is where you can enter Callsigns to initiate a quick connect.

The Window Tab allows you to easily switch between open Windows in PKTerm '99. Simply press the tab for the window that you wish to be moved to the front of the PKTerm' 98 window.



Another addition to PKTerm '99 is the PKTerm icon, which is placed in the system tray at the bottom right-hand of your screen.

Single Radio TNCs

The TimeWave PK 232, PK 232MBX, DSP232, and the DSP 1232 may be used for HF packet, VHF packet or HF Non-Packet operation but not all at the same time. Featuring one radio port, it can be cabled to a SSB radio for HF operation, an FM radio for VHF/UHF operation, or a combination SSB/FM transceiver, such as the ICOM-706. In any of these cases, the modem within the TNC must be programmed to accommodate either HF or VHF packet.

300 baud HF packet is operated in HF mode and standard AFSK tone pairs are generally used. To switch to 1200 baud FM packet, the tone pairs – and other packet parameters – within the modem must be changed. This task is completed automatically for you when you click HF packet or VHF packet as a mode of operation in the Communications Settings page under File/Settings.

For reference, these are the default values for HF and VHF packet operation that PKTerm '99 uses:

Parameter HF (default) VHF setting

slottime (12) 30

hbaud (300) 1200

VHF (off) on

modem (10) 11/4

maxframe (1) 4

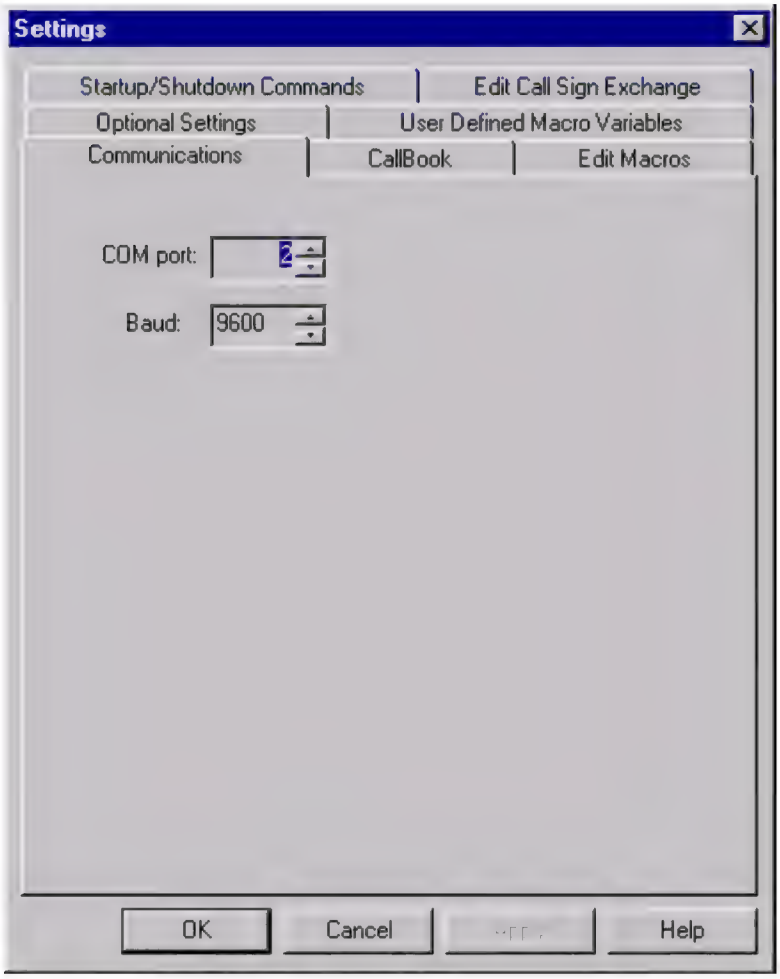
frack (8) 5

paclen (64 or less) 128

There are a few differences between using PKTerm '99 with the single radio Timewave TNCs and using it with other Multiport TNCs

In order to open an HF Non-Packet session you must close the VHF or HF Packet session window first.

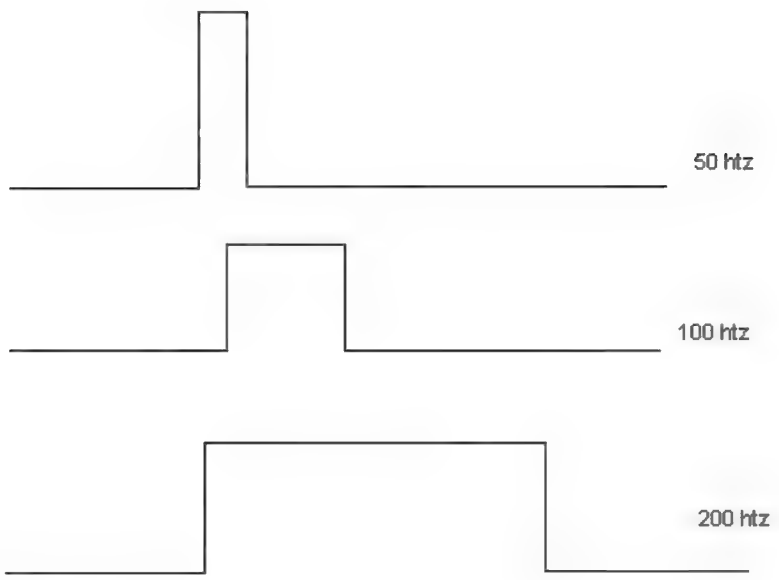
As noted above, the single port TNCs use one port for HF packet and VHF packet operation. When changing from one mode of operation to the other, you must open the Settings screen and click on the Communications tab. There you can choose either HF or VHF packet Modes.



If you are using a PK 232 or a DSP 232 then when you first open PKTerm '99, neither VHF or HF view will be open. Simply click on the file menu and choose whether you want HF or VHF View.

Bandwidth

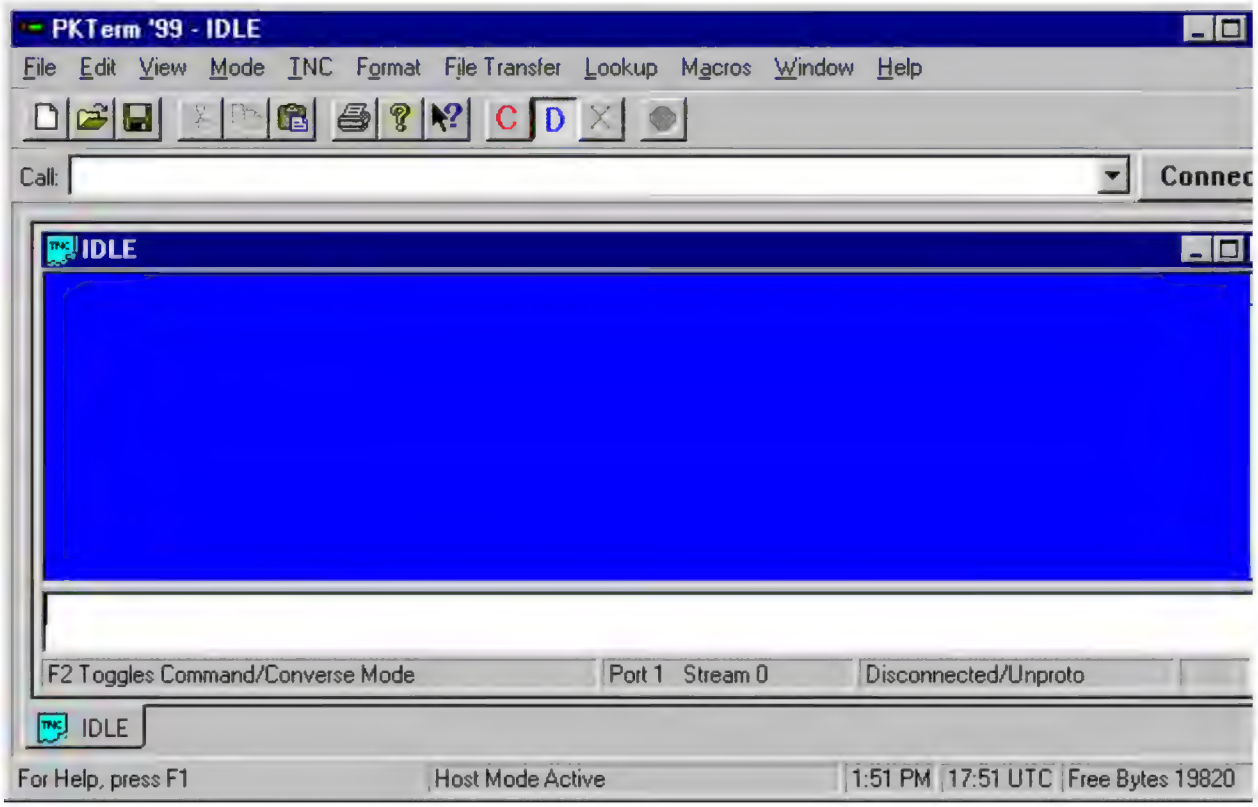
Bandwidth is the Width of the signal being received. You can think of a low bandwidth as being like a Laser Pointer. You get one sharp, narrow and bright beam of light, but it is hard to get the light exactly where you want it. A broader bandwidth is like a cheap flashlight, you can shine it on a lot of things and one time but the light you see is kind of hazy. The smaller the bandwidth, the tighter the and clearer the signal will be but the harder it will be to tune into that signal. The larger the bandwidth, The easier it will be to tune the signal but the less clear the reception will be. This picture will illustrate the concept of Bandwidth in respect to the three settings that PK-Term '99 uses: 50, 100, 200



PK-Term '99 VHF Controls

VHF View

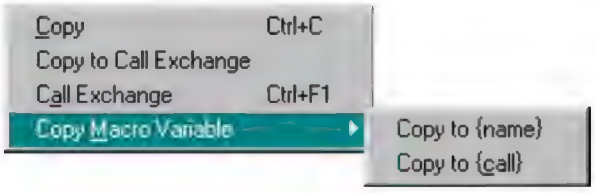
This is a PK-Term ‘99 VHF Window.



Right Click Menu

There is a pop-up menu available in the text and chat windows by right clicking in the window. You can also access the Copy command by right clicking in the command window or any of the port monitor windows.

This is the pop-up menu you get when right-clicking in the text window.



This is the pop-up menu you get when right-clicking in the chat window.

Window Menu

This is the Window Menu. For more information on each option, click on it.

Cascade - Use this command to arrange multiple opened windows in an overlapped fashion.

Tile - Use this command to arrange multiple opened windows in a non-overlapped fashion.

Arrange Icons - Use this command to arrange the icons for minimized windows at the bottom of the main window.

Help Menu

This is the Help Menu. For more information on each option, click on it.

Help Topics - PK-Term '99 Help is your online help.

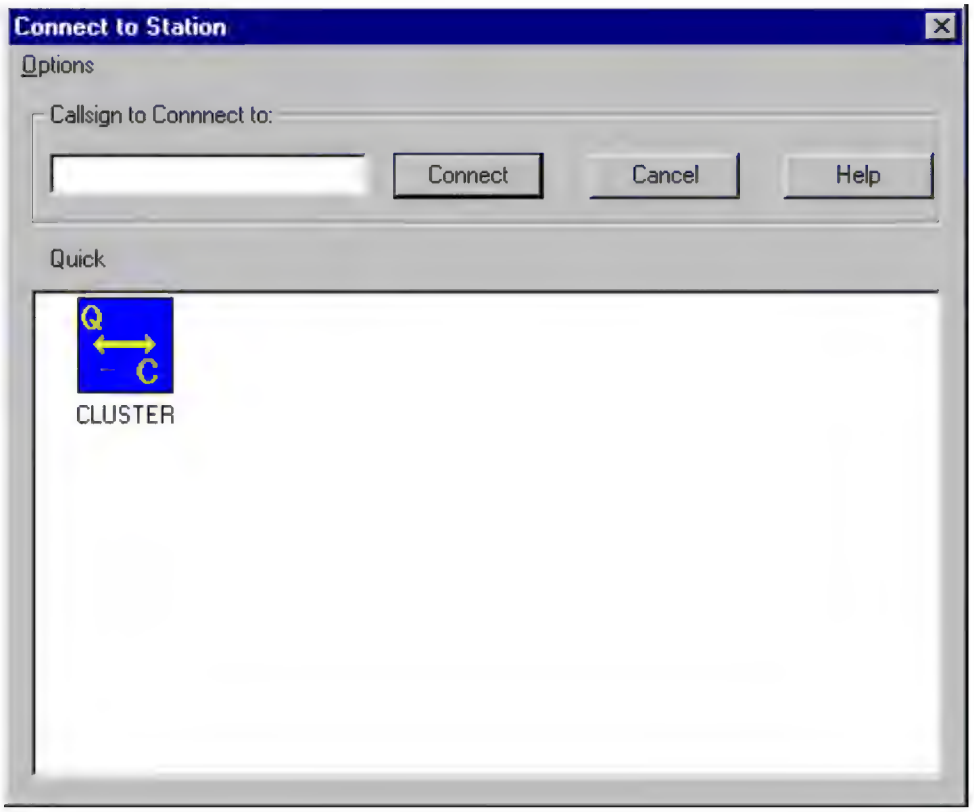
Window Help – This is your Window 95/98/NT Help.

Register Software – Use this to register your software.

About PK-Term '99 – Shows to whom the software is registered and what hardware and firmware is used, and version number.

Quick Connect

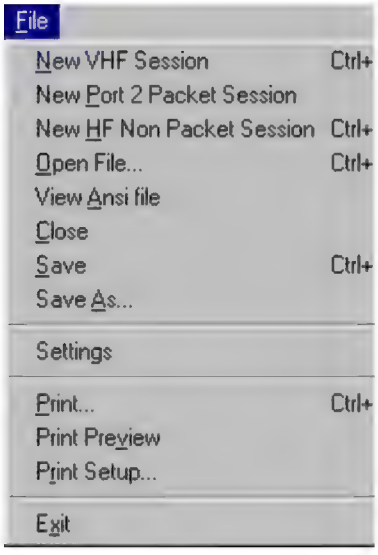
To create a Quick Connect to a station from the Options menu select Add Quick Connect. To edit a previous entry, select Edit Quick Connect. To delete a previous entry, select Delete Quick Connect.



VHF File Menu

VHF File Menu

This is the File Menu. For more information on each option, click on it.



New VHF Session - This command opens a new unconnected VHF stream in a new window on Radio Port 1.

Port 2 Session Command - This command opens a new unconnected session on Packet Radio Port 2.

HF Session Command - This command opens a window that allows you to use non-packet HF modes, if allowed by your TNC.

Open File – Use this command to open an existing document.

View ANSI file - ANSI – American National

Standard Institute. ANSI is an 8-bit character set of 256 characters. You can view an ANSI file with this command.

Close – Use this command to close the active session.

Save – Use this command to save the active session to its current name and directory.

Save As – Use this command to save and name the active session.

Settings - This allows you options to select which CallBook you are using, to select the drive is associated with your CD-ROM, to change your Port settings and baud rate, to create macros, and to create startup and shutdown commands.

Print – Use this command to print a session.

Print Preview – Allows you to preview a session before printing.

Print Setup – Allows you to set different parameters for printing.

Exit - The Exit command exits from the program

VHF Session Command

The New VHF Session command opens a new unconnected VHF stream in a new window on Radio Port 1. This is for VHF Packet sessions only. Select the "New VHF Session" option in the File Menu.

Port 2 Session Command

The New Port 2 session command opens a new session on Packet Radio Port 2. This is only for VHF and HF Packet session, depending on your TNC. Select the "New Port 2 Session" option in the File Menu.

HF Session Command

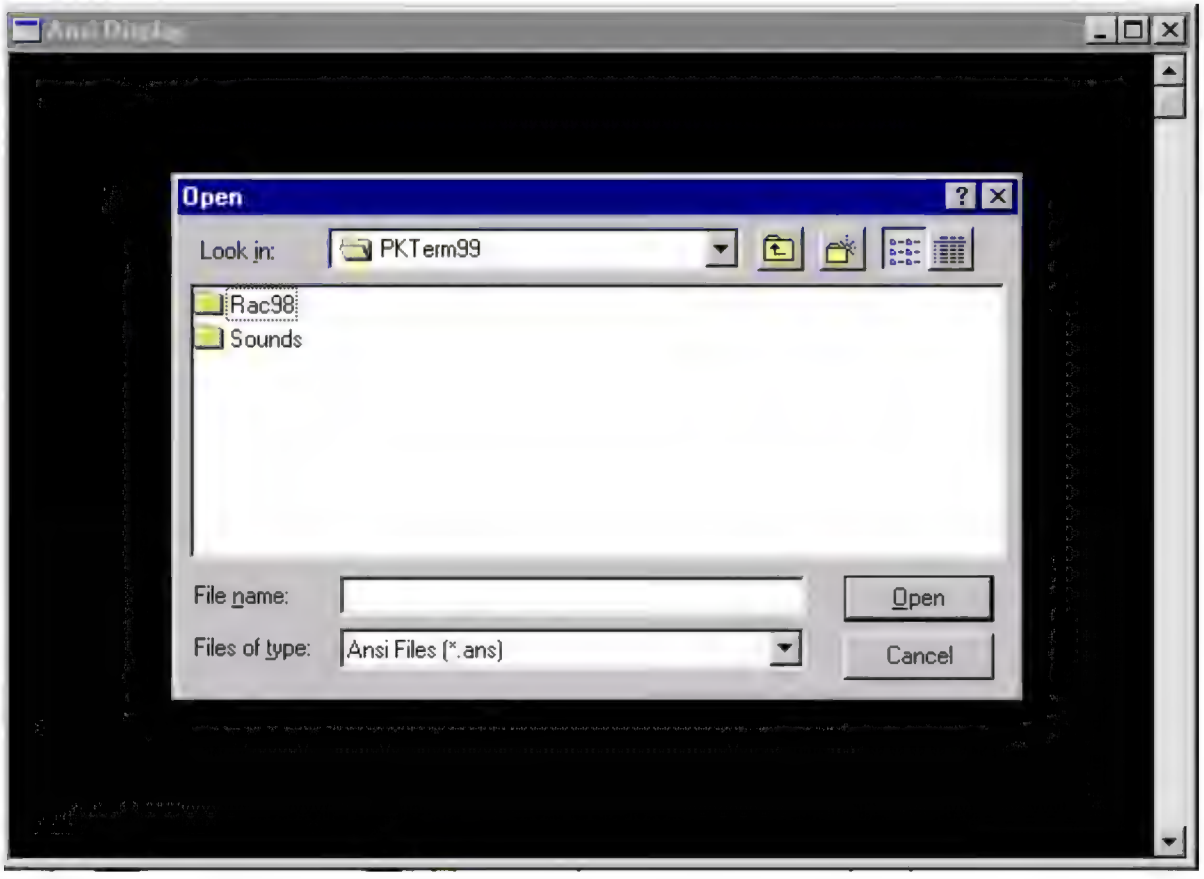
The New HF Non-Packet Session command opens a window that allows you to use non-packet HF modes, if allowed by your TNC. Select the "New HF Session" from the File Menu.

View ANSI File

ANSI – American National Standard Institute. ANSI is an 8-bit character set of 256 characters.

To view an ANSI file:

1. Select VIEW ANSI FILE from the File Menu.
2. This brings up the following screen.
3. Select the folder where the file you want to view is located. For more information see Windows Help.
4. Select the file you want to view and click Open.
5. The ANSI file will be displayed in the window.



Settings Command

The settings option brings up the settings dialog box. This allows you to select which type of CD CallBook you are using, and which drive is associated with your CD-ROM, allows you to

change your port settings and baud rate, to create macros, and to create and edit startup and shutdown commands.

CallBook Settings

Communications Settings

Edit Macros

Startup/Shutdown Commands

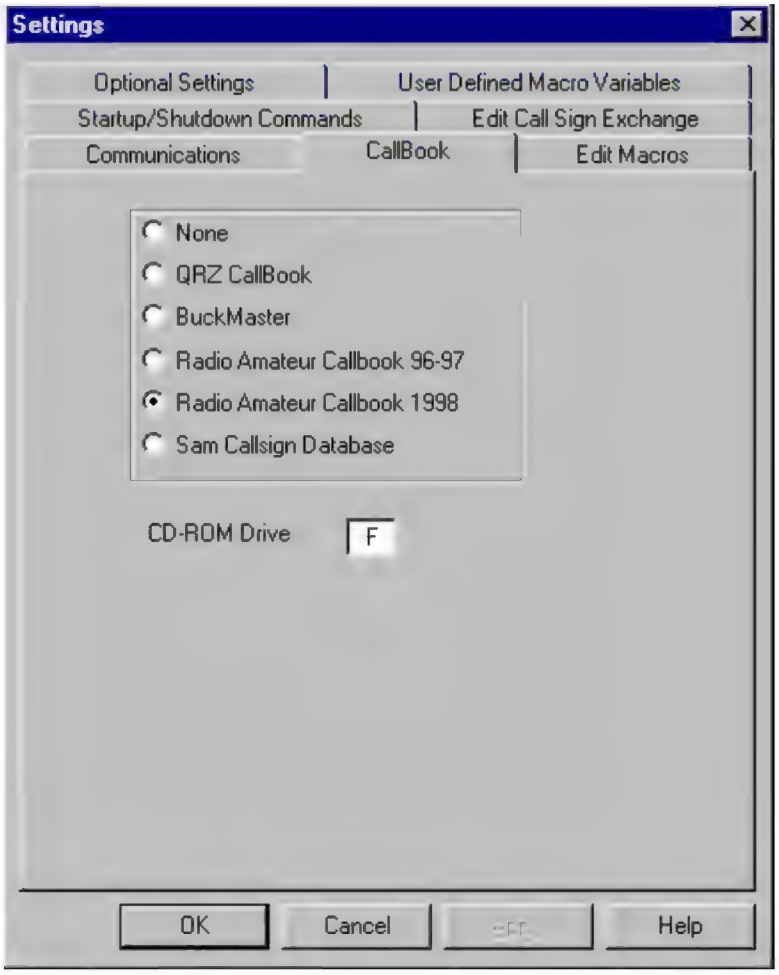
Edit Call Sign Exchange

Optional Settings

User Defined Macro Variables

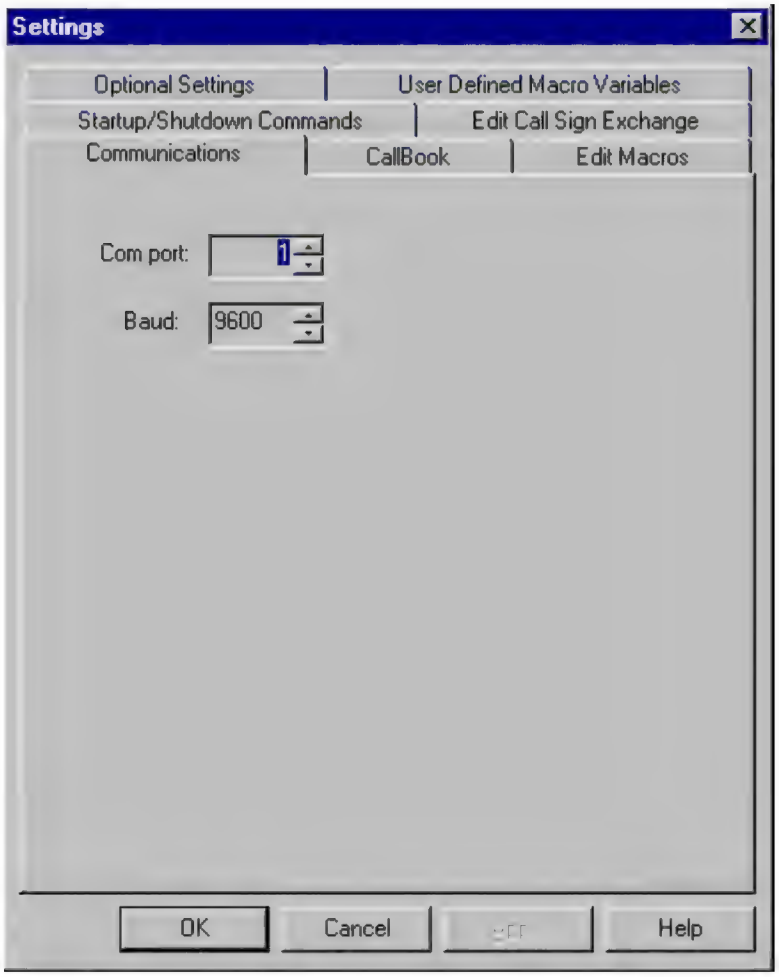
CallBook Settings

A CallBook is a Database of Amateur Radio Call Signs. The following dialog box allows you to select which CD CallBook you use. Whether it is QRZ, BuckMaster, RAC, SAM, or none. It also allows you to set the drive letter that corresponds to your CD-ROM. PK-Term '99 includes a mini-contact database so even if you don't have a CallBook, you can keep track of your contacts.



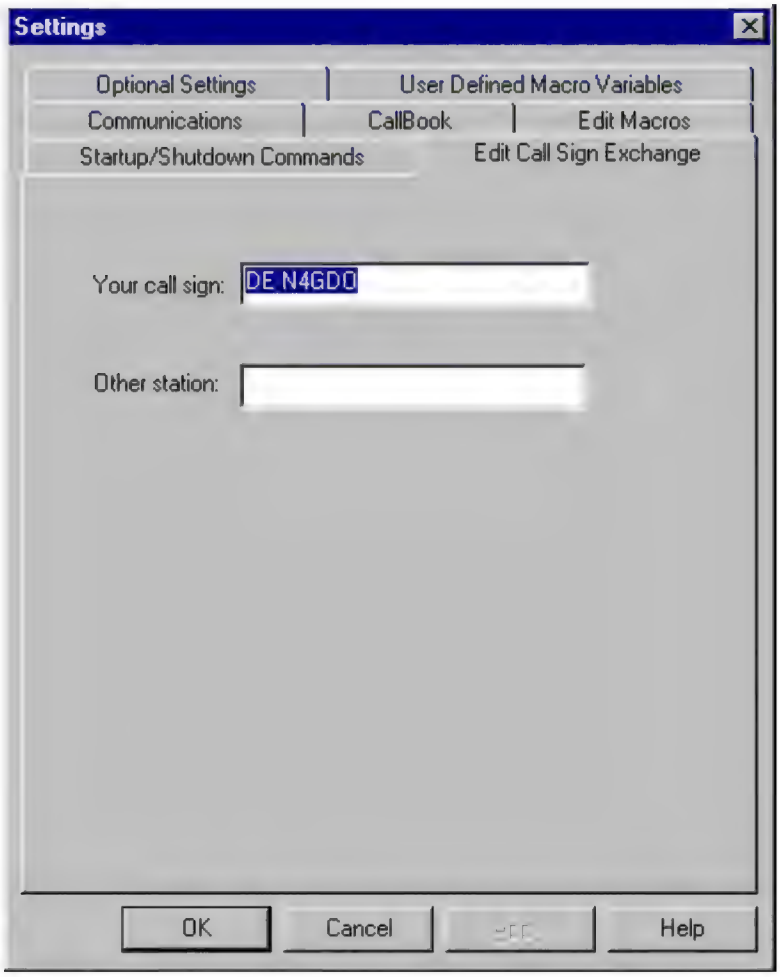
Communications Settings

This allows you set the COM port to which you are connected, and the baud rate used when communicating with the TNC. PK-Term '99 supports COM1 through COM35. Make sure your TNC is properly connected to the selected COM port, and that you select the correct baud rate to use to communicate with the TNC. (The baud rate selected should be set to the same as the current TNC baud rate, if it had been used before with another program.)



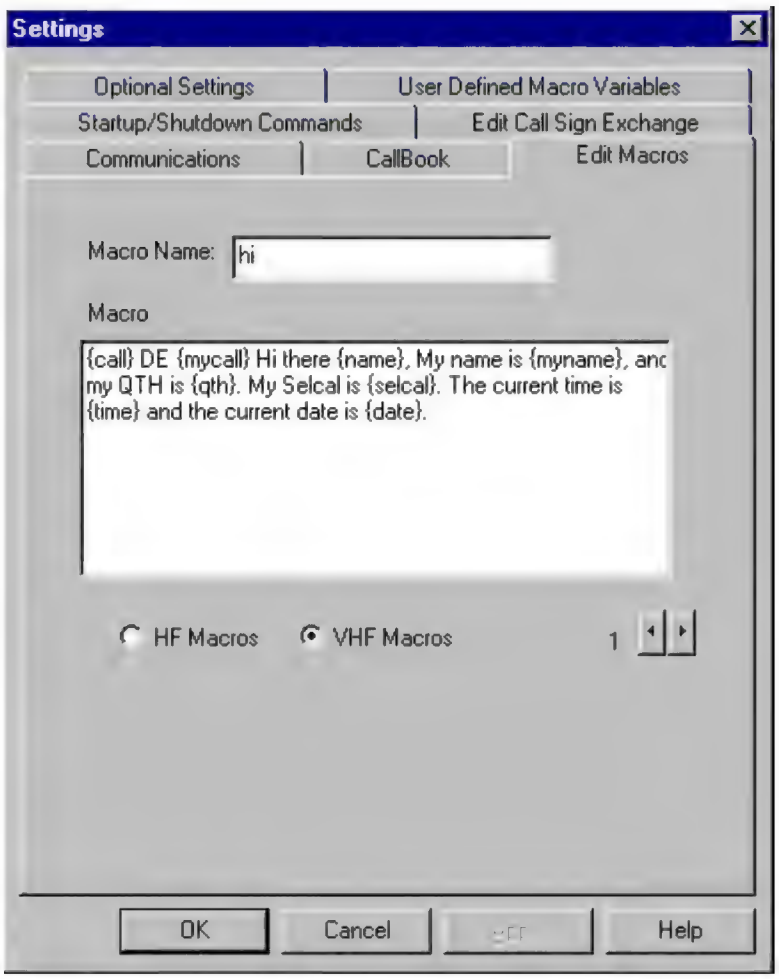
Edit Call Sign Exchange

This box allows you to edit your call sign and the other station's call sign to be used with the Call Exchange hot key.



Edit Macros Settings

A Macro is a user-defined text that is associated with a particular keystroke. This dialog box allows you to create macros. There are 10 macros for VHF and 10 macros for HF. Pick a name for the macro and then enter the information in the macro text window. (You can use <Ctrl Enter> to insert a carriage return into the macro text). You can create a macro using the user-defined macro variables as shown in the picture below. The name you specify for the new macro will show up in the macro menu.



Macro Description

Enter the macro to be used with the new name.

Macro Name

Enter a name for the new macro here.

Macro Variables

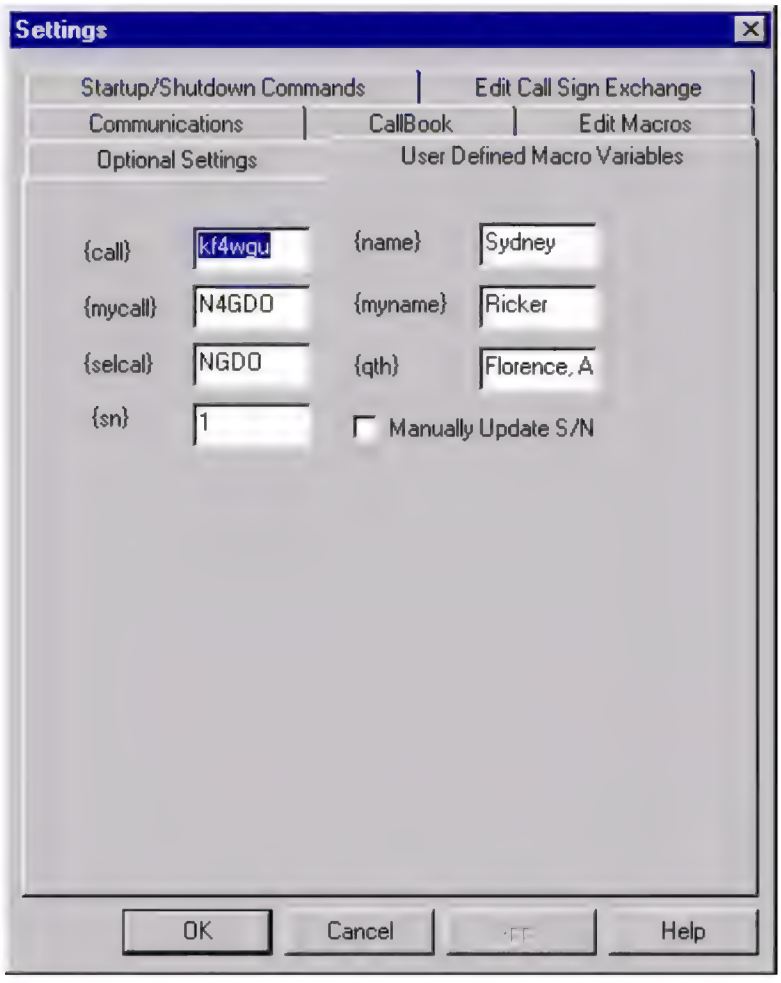
These variables can be used in the macros that you create in the Edit Macros Settings. The macros can be created using variable names and when these variables change, the macro changes automatically. Click each setting for a description. There are five macro variables you can use that are not listed. Three are {date} and {time}{utctime}. These settings are taken from your system clock. The other two are {xmit} and {rec}. {utctime} will show Grenich mean time. The {xmit} variable turns the Transmitter on and the {rec} variable turns the Transmitter off. These two variables can only be used in HF macros. With the release of version 1.3 of PK-Term '99, another Macro variable is available. {sn} is used as a serial number for contests. You can use this new macro variable to keep track of the number of contacts you would use. For example you could set up a macro in the 'edit macro' tab of the settings screen and you could put in there:

This is {mycall} from {qth} you are contact number {sn}

This macro would read as:

This is N4GDO from Florence, AL you are contact number 1.

With the {sn} macro, PK-Term '99 will remember the number of times you ran the macro and will increment the number displayed by 1 each time. PK-Term '99 will remember the number that was last used even when you close down the program, so you can take a break from the contest to eat. When you come back the number will be the same as when you left. To restore the number back to zero at the end of the contest or at the beginning of a new one simply go to the 'user defined macro variables' tab in the settings window and change the number in the {sn} field to 0.



For example, if the settings were filled in with these values:

{call} – KF4WGU

{name} – Sydney

{mycall} – N4GDO

{myname} – ricker

{selcal} – ngdo

{qth} – Florence, AL

you could set up a macro like this:

{call} DE {mycall} Hi there {name}, My name is {myname}, and my QTH is {qth}. My Selcal is {selcal}. The current time is {time} and the current date is {date}.

and when the macro was invoked, it would type this to the screen:

> KF4WGU de N4GDO Hi there Sydney My name is ricker and my QTH is Florence, AL. My selcal is ngdo. The current time is 09:33:41 and the current date is Wednesday, June 17, 1998.

Optional Settings

MAXUSERS on startup

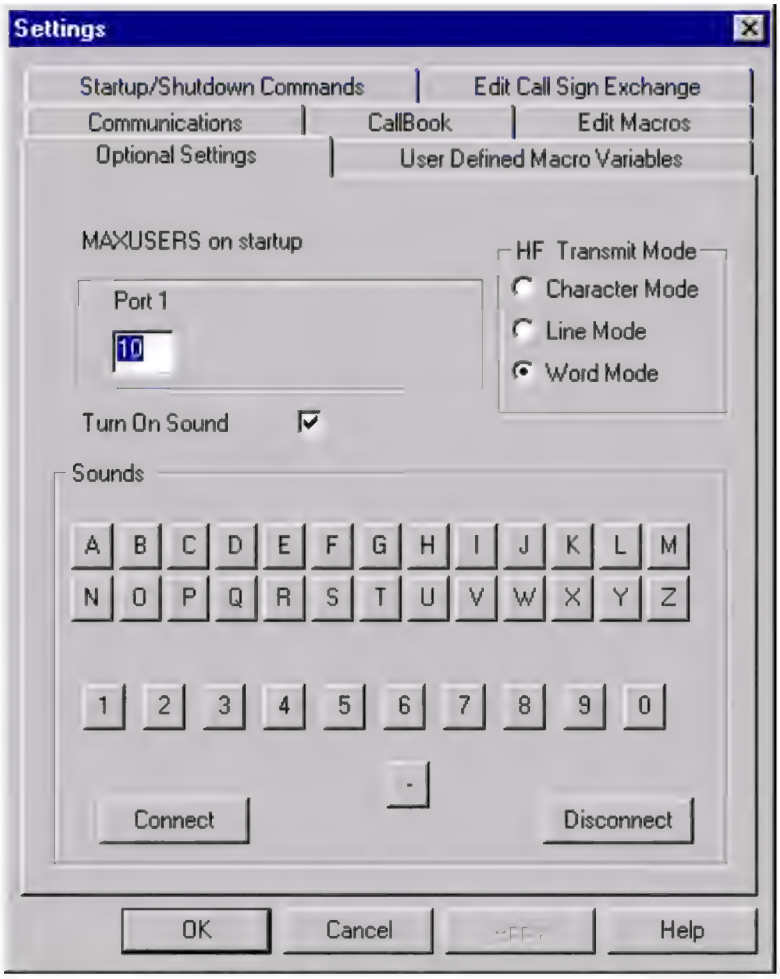
This section allows you to set the maximum number of users on startup. The MAXUSERS command causes the TNC to allocate the memory required for the maximum number of simultaneous connections you wish to allow. Each connection uses a different stream. You will see an option to change MAXUSERS on each port that you have available on your TNC. The highest each port can be set is 10.

Sounds

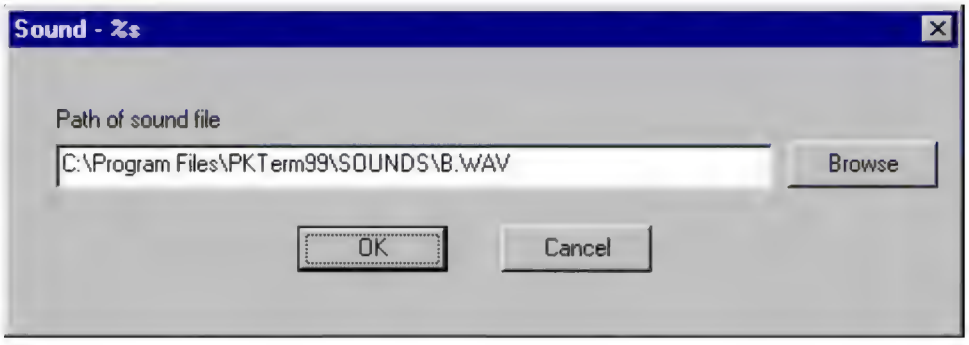
The Sound ID on Connect option allows you to turn sounds on or off. If you choose sounds to be on, you can use the sounds that are included or choose your own.

HF Transmit Mode

For more information on HF Transmit Mode click here



To set the sounds, click on each item and enter the filename of the sound to associate with it.



Shutdown Commands

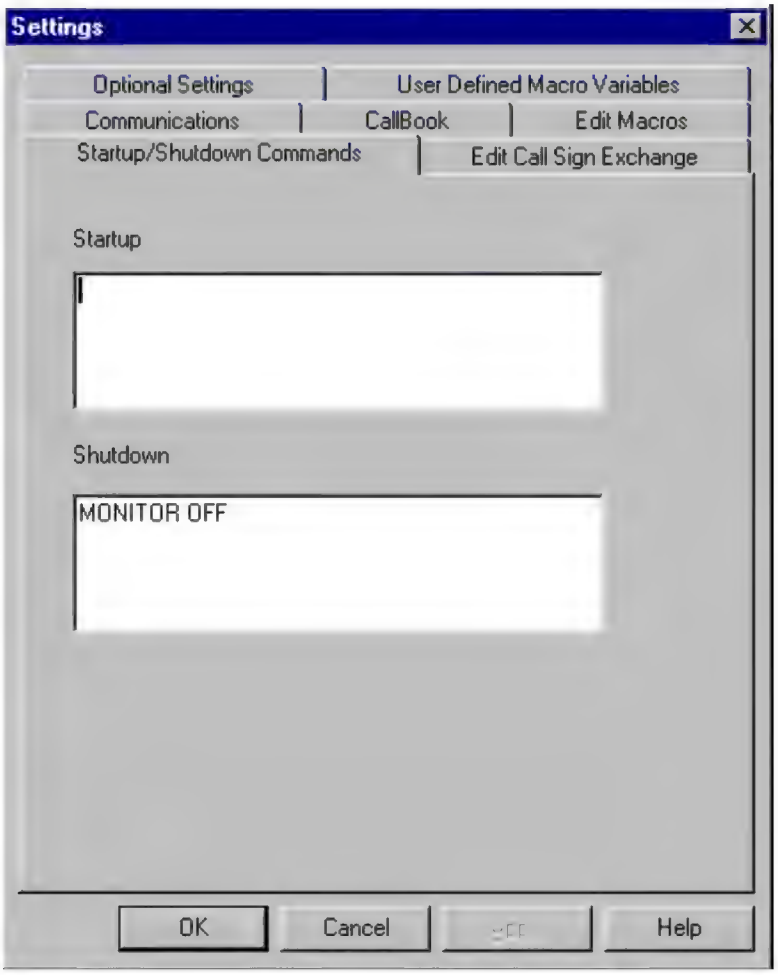
Enter the commands in this box that you want to send to your TNC when exiting form PK-Term '99.

Startup commands

Enter the commands in this box that you want to send to your TNC upon startup. This allows you to customize your TNC settings.

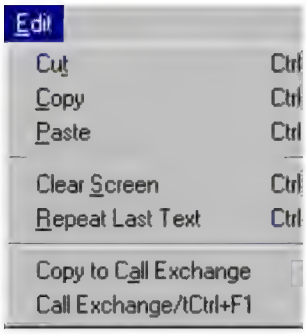
Startup/Shutdown Commands

The dialog box shown is where you can enter your own startup and shutdown commands. These commands are sent to your TNC during startup and shutdown.



VHF Edit Menu

This is the Edit Menu. For more information on each option, click on it.



Cut - Use this command to remove the currently selected data from the

session and put it on the clipboard

Copy - Use this command to copy selected data onto the clipboard.

Paste - Use this command to insert a copy of the clipboard contents at the insertion point.

Clear Screen - Clears the text from the active text window.

Repeat Last Text - Repeats the last text you sent. The text will be put into the active chat window.

Copy To Call Exchange – Allows you to copy the Call Sign you are communicating with into the call exchange buffer.

Call Exchange - Takes the Call Sign you have copied with the Copy to Call Exchange and appends it to the information that was created in the settings for Call Exchange.

Clear Screen

Clears the text from the active text window.

Repeat Last Text

Repeats the last text you sent. The text will be put into the active chat window

Copy to Call Exchange

Copy to Call Exchange allows you to copy a Call Sign from your Communication settings into the call exchange buffer, and then use it by clicking on Call Exchange.

To copy a Call Sign you need to highlight it and then select the Copy to Call Exchange option from the Edit menu or right click and choose Copy to Call Exchange from the pop-up menu.

Call Exchange

Call Exchange takes the Call Sign you have copied with the Copy to Call Exchange and sends it to the chat window along with your previously stored Call Sign. Call Exchange settings are accessed by clicking on File, Settings, and the Edit Call Sign Exchange tab.

To use the Call Sign in your Call Exchange, select Call Exchange from the Edit Menu or by right clicking and choosing the Call Exchange from the pop-up menu.

VHF View Menu

This is the View Menu. For more information on each option, click on it.

Toolbar - Use this command to display and hide the Toolbar.

Status Bar – Use this command to display and hide the Status Bar.

Monitor Port 1 – Use this command to display and hide the Monitor Port 1 Window.

Monitor Port 2 - Use this command to display and hide the Monitor Port 2 Window.

Commands Window - Use this command to display and hide the Command

Window.

(Check mark indicates it is displayed)

Toolbar Command

Use this command to display and hide the Toolbar, which includes buttons for some of the most common commands in PK-Term '99, such as File Open. A check mark appears next to the menu item when the Toolbar is displayed.

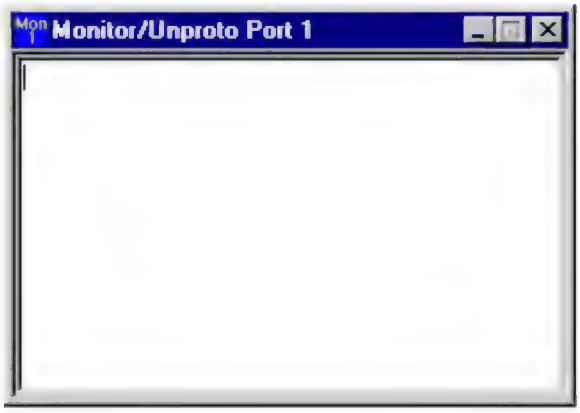
See Toolbar for help on using the toolbar.

Status Bar Command

Use this command to display and hide the Status Bar, which describes the action to be executed by the selected menu item or depressed toolbar button, and keyboard latch state. A check mark appears next to the menu item when the Status Bar is displayed.

See Status Bar for help on using the status bar.

Monitor/Unproto 1 Window

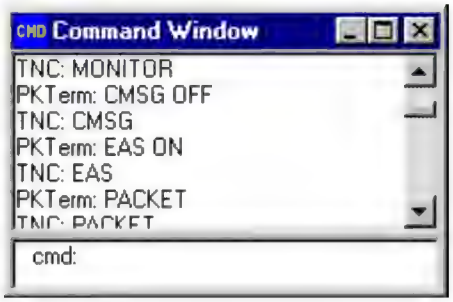


This is where network traffic for Radio Port 1 is viewed.

Monitor/Unproto 2 Window

This is where network traffic for Radio Port 2 is viewed.

Command Window



This is where the commands you send to the TNC and the return value of the commands from the TNC are viewed.

The chat window at the bottom allows you to enter commands to the TNC only.

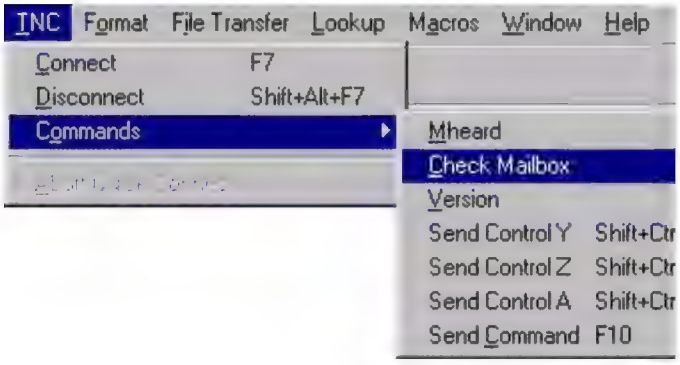
Minimize All Windows When Main Window is Minimized

When this item is checked, the Command Window and Monitor Windows are minimized and maximized when the larger PK-Term window is minimized and maximized.

VHF TNC Menu

VHF TNC Menu

This is the VHF TNC Menu. For more information on each option, click on it.



Connect – This command brings up the Connect Window.

Disconnect - This command disconnects the active window from the current station it is connected to.

Commands – Sends program defined commands to the TNC.

Abort Connect – Aborts a Quick Connect.

Connect Command

There are three ways to connect to a station:

1. Press F2. This puts you in command mode. Type at the cmd: prompt "c <Call Sign>" and press Enter.

2. Press F7 or select the Connect Command in the TNC menu that brings up the Connect to Station dialog box. To use Connect you must enter the Call Sign that you want to connect to and then press the connect button.

3. You can also create a Quick Connect to the stations you most use. This allows you to click on the station rather enter them every time you want to connect to it. To create this shortcut you must select add from the options menu.

Disconnect Command

The Disconnect Command disconnects the active window from the currently connected station. There are three ways to disconnect from a station:

1. Press F2 and type " d" at the cmd: command prompt. (Without the quotes)

2. Press Shift Alt F7.

3. Select Disconnect from the TNC menu.

Mheard Command

Selecting the Mheard Command returns a list of the stations heard by the TNC. The stations heard response will appear in the Command Window.

Version Command

The Version command causes the TNC to display the current version number.

Send Control Y

Some bulletin boards and clusters use this sequence for text editing. Some of these commands are similar to the standard Windows commands so we use these keystrokes instead. Hotkey is Shift-Ctrl-Y.

Send Control Z

Some bulletin boards and clusters use this sequence for text editing. Some of these commands are similar to the standard Windows commands so we use these keystrokes instead. Hotkey is Shift-Ctrl-Z.

Send Control A

Some bulletin boards and clusters use this sequence for text editing. Some of these commands are similar to the standard Windows commands so we use these keystrokes instead. Hotkey is Shift-Ctrl-A.

Send Command

The Send command brings up a Send Command dialog box. This allows the user to enter a TNC command. The results of these commands will be in the Command Window.

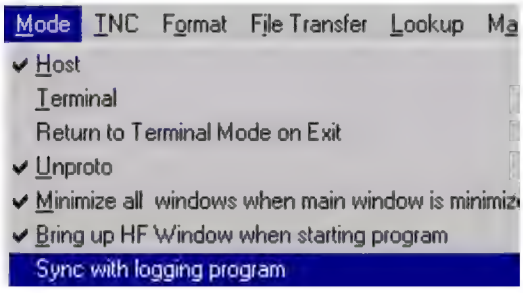
Abort Connect

When using a VHF Quick Connect, if you use this button it will abort the Quick Connect. This will not work when you use the regular Connect option.

VHF Mode Menu

VHF Mode Menu

This is the mode Menu. For more information on each option, click on it.



Host - Host mode Operation provides a standardized method of communication between the TimeWave TNC and PK-Term '99 for Windows.

Terminal – Terminal mode Operation is a communication mode with the TNC similar to that of a standard (not Host mode) Terminal Program**.**

Return to Terminal Mode on Exit – Allows you to exit Host mode and return to Terminal mode when the program is closed.

Unproto Mode - Unproto mode Operation allows packets to be transmitted without being connected to a station.

Bring up HF window when starting program - This allows you to set PK-Term '99 to bring up the HF non-session window when the program starts, allowing people who don't use the HF modes to not be bothered by

the HF window popping up when they start the program.

Sync with logging program – allows PK-Term '99 to sync with Log Windows™. Both Log Windows and PK-Term '99 must be running to use this command.

Host Mode

Host mode Operation is the normal communications mode between a TimeWave TNC and PK-Term '99 for Windows. It allows for multi-port, multi-stream and non-packet modes in separate windows, at the same time.

Terminal Mode

Terminal mode Operation is a communication mode with the TNC similar to that of the Windows Terminal Program. All Terminal mode Functions are at the TNC level with the software acting as a "Dumb" terminal.

Return to Terminal Mode on Exit

When selected, the TNC will be returned to Terminal mode, when exiting the program. You may want to select this choice if you use other programs to operate the TNC, when you are not using PK-Term '99.

Unproto Mode

Unproto mode Operation allows packets to be transmitted without being connected to a station. This packet is not directed to a specific station, therefore no acknowledge is expected and no retries are attempted. This mode is often used for calling CQ and for informal round table chats. This can be used with either Host or Terminal mode.

Format Menu

Format Menu

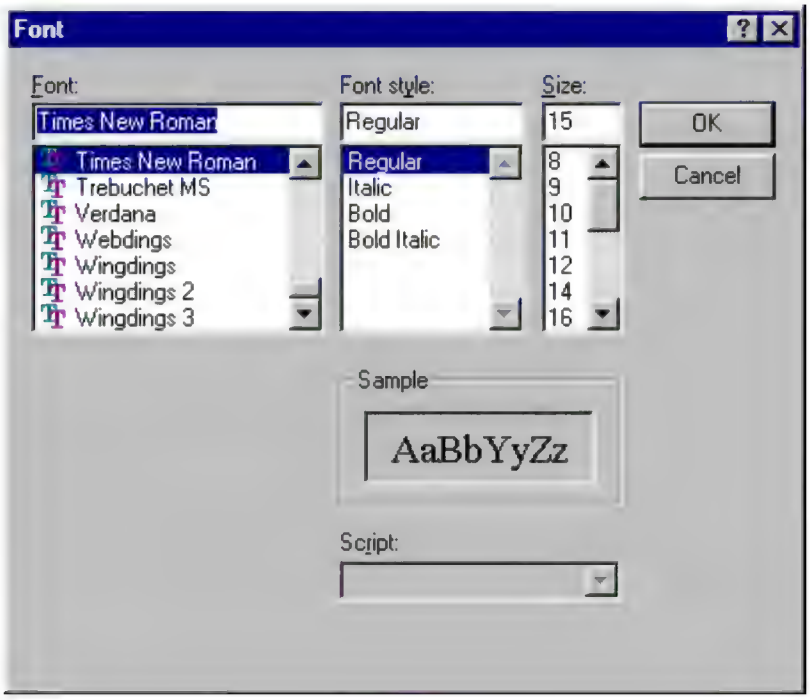
This is the Format Menu. For more information on each option, click on it.

Font - The Font command allows the user to select the type, style and the size of the font used to display text in the window.

Color – In the Text buffer, the Color command allows the user to select the colors of the text, the transmit text, the command text, and the background. In the Chat buffer, the user can change the color of the chat text and the background.

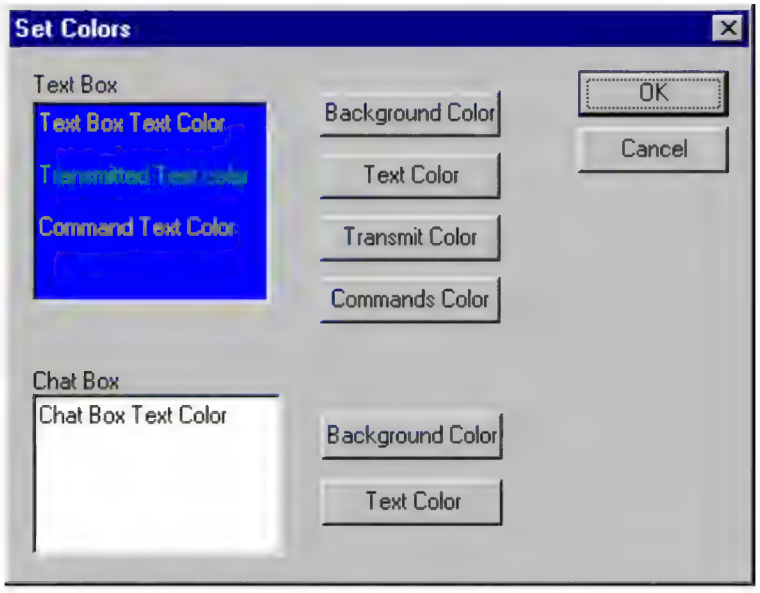
Font Command

The Font command allows the user to select the type, style, and the size of the font used to display text.



Color Command

The Color command allows the user to select the color of the text and background for the Text buffer, the Chat buffer, the Transmit color, and the Commands color.

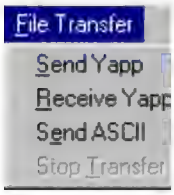


Selecting any of the four-color boxes brings up the following Color Chart. By selecting the Define Custom Colors, you are able to choose from common colors or you can define new colors to use.

VHF File Trasnfer Menu

VHF File Transfer Menu

This is the VHF File Transfer Menu. For more information on each option, click on it.



Send YAPP - Sends a file using the Binary Transfer Protocol called YAPP.

Receive YAPP – Receives a file using the Binary Transfer Protocol called YAPP.

Send ASCII - Sends an ASCII file with no protocol.

Stop Transfer - Stops any file transfer (YAPP or ASCII).

Send YAPP

Sends a file using the Binary Transfer Protocol called YAPP.

Send YAPP allows you to transfer a file (text, binary, picture, etc) from your computer to another station.

To send a file with YAPP Upload, first make sure you are in the session window of the station to which you want to send a file. If you are connected to a BBS, you will want to tell the BBS that you are doing a YAPP upload before you start your transfer. After the other station is ready to receive, pick the Send YAPP option from the File Transfer Menu. A file dialog box will be presented to you. Now you can pick the file name for the transferred file or cancel the transfer.

After you pick the file, the YAPP upload will begin. Note that all the file transfer information is updated on the taskbar for the current session. This will let you know the progress of your file transfer. You can also continue to chat with the other station while the transfer takes place.

After the transfer is done, the status bar will be updated.

To abort a transfer, select the 'Stop file transfer' from the menu or press the Stop button on the toolbar.

Receive YAPP

Receives a file using the Binary Transfer Protocol called YAPP.

YAPP Download allows you to receive a file (text, binary, picture, etc) from another station using the YAPP transfer protocol.

To receive a file with YAPP Download, first make sure you are in the session window of the station that you want to get the file from. If you are connected to a BBS, you will want to tell the BBS that you are doing a YAPP download before you start your transfer. After the other station is ready to receive, pick the YAPP Download option on the menu.

A file dialog box will be presented to you. Now you can pick the file name for the transferred file or cancel the transfer.

After you pick the file, the YAPP download will begin. Note that all the file transfer information is updated on the taskbar for the current session. This will let you know the progress of your file transfer. You can also continue to chat with the other station while the transfer takes place.

When the transfer is finished, the status bar will be updated.

To abort a transfer, select 'Stop file transfer' from the menu or press the Stop button on the toolbar.

Send ASCII

Sends an ASCII text file with no protocol. This option allows you to upload ASCII files while connected to another station. To send an ASCII file with this option, you will be presented with a dialog box asking you for the filename. Chose the filename and press OK. The file will then be transferred. To abort the transfer, click on the  button or choose the Stop Transfer menu option.

Stop Transfer

Stops any file transfer (YAPP or ASCII). When the Stop button is selected () any remaining text or data that has not been sent to the TNC is terminated. You may see some text on the screen after the transfer is aborted. This is normal due emptying of the TNC buffer.

Lookup Menu

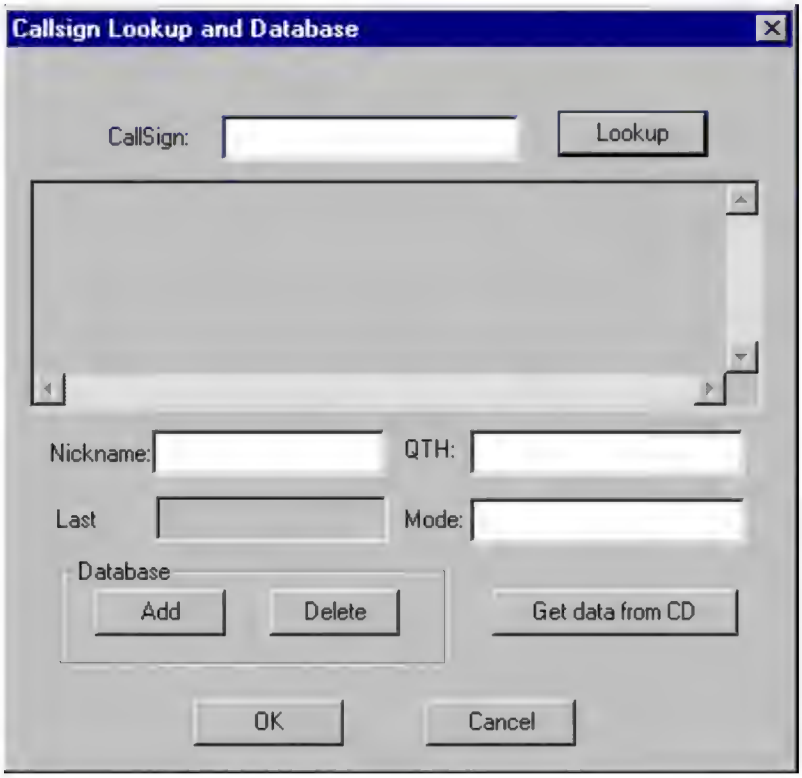
LookUp Menu

This is the LookUp Menu. For more information on each option, click on it.

Call Sign - Allows the user to look up a particular Call Sign.

Call Sign LookUp Command

The Call Sign LookUp command allows the user to look up a particular Call Sign. You enter the Call Sign and then it looks it up on the CallBook specified in the Setting section to see whom it belongs to and then it displays the information. Before the information is returned from the CD CallBook, you can enter or modify the contact information for that station, in PK-Term '99's contact database.



Macros Menu

Macros Menu

This is the Macros Menu. For more information on each option, click on it.

A **Macro** is user-defined text that is associated with a particular keystroke. There are 10 macros for VHF and 10 macros for HF. Pick a name for the macro and then enter the information in the macro text window.

To create a macro select the settings option from the file menu and then select the macro option. It will give you the Edit Macro Settings page.

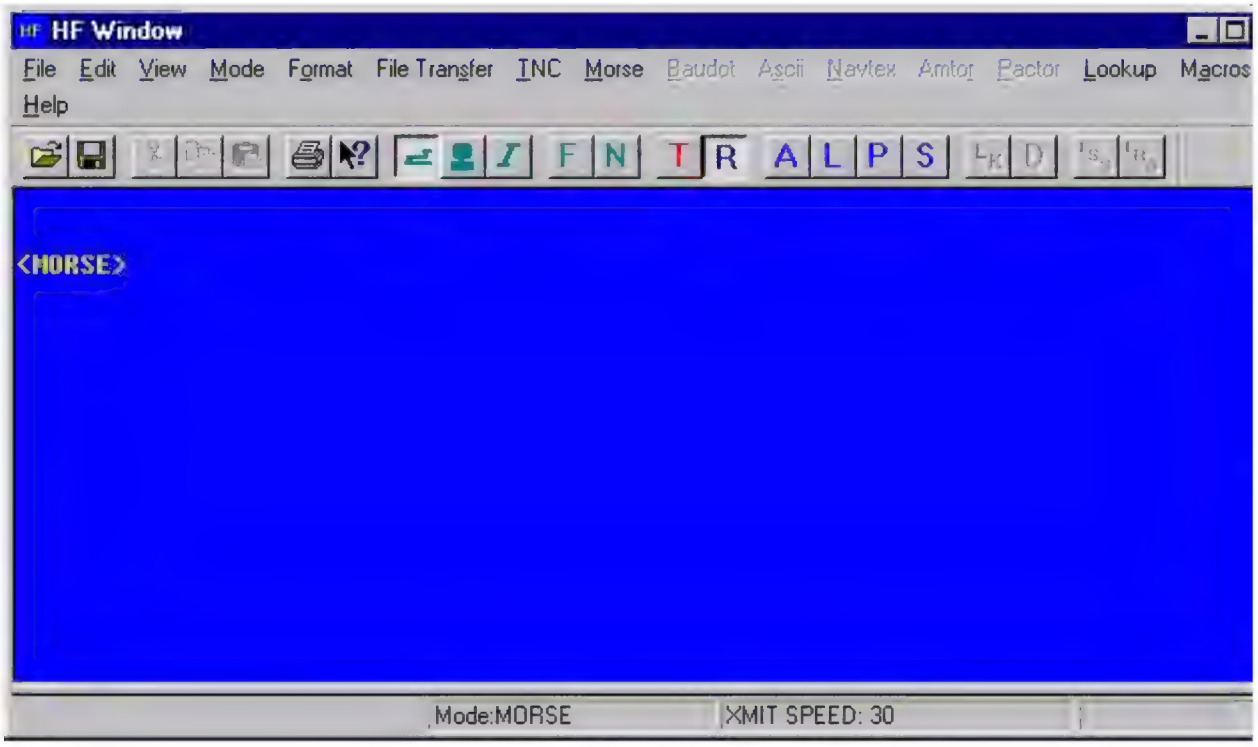
Macros

Macros are messages that the user is able to define. You can create up to ten different macros in both Packet and Non-Packet HF modes.

PK-Term '99 HF Controls

HF View

This is a PK-Term '99 HF Window.



Link to a Station

To link to another station, you need to press  . Link will bring up a connect box and you need to enter the SELCAL of the station you want to connect to.

Disconnect from a Station

To disconnect from a station, press  .

Sending to Receiving Data

The station that initiates the link starts as the Information Sending Station (ISS)  .

The station receiving a link request and linking starts as the Information Receiving Station (IRS)  .

As ISS you may send information by typing on the type-ahead line (window) which is immediately below the text window and above the status bar. Once you have finished typing what you wish, you can press either the ISS or the IRS button to change the information direction. Once you have done that, the link will sound different and your status bar will reflect your station as IRS.

Siam

Siam stands for signal identification and acquisition Mode. This mode allows digital signals to be automatically analyzed so that the ham radio operators can identify and correctly use the mode of the diguital signal. To use SIAM with PKTerm '99 click on the  button on the HF Toolbar, tune in a signal in accordance with the instructions in your TNC manual. Once the mode is identified by the TNC the information on the mode will be displayed on the screen. With that information you can then choose the mode of operation via the HF Toolbar.

For example if you got:

0.47 50 baud, baudot, RXREV OFF

you would click on the Baudot Button on the HF toolbar to go into this mode.

Changing HF Data Transmit Mode

A new feature in PKterm '99 is the HF Data Transmit Mode. With this new option you can choose one of many ways to send your HF Communications. The new settings are: (1) Character mode (2) Word Mode or (3)Line Mode.

Character Mode: With this setting selected simply the PKterm '99 will transfer data after each character is enter. For

example. If you are typing in CQ CQ CQ DE N4GDO K. then PKterm would transmit as follows:

(T)=transmit Data to TNC

C(T) Q(T) C(T) Q(T) C(T) Q(T) D(T) E(T) N(T) 4(T) G(T) D(T) O(T) K(T)

Word Mode: If you select this option then PKterm '99 will transmit after every word or everytime you press the <space> bar or the <enter> key. And example of this would be again if you were sending CQ CQ CQ DE N4GDO K then it would be transmitted as follows.

(T)=Transmitted data to TNC

CQ(T) CQ(T) CQ(T) DE(T) N4GDO(T) K(T)

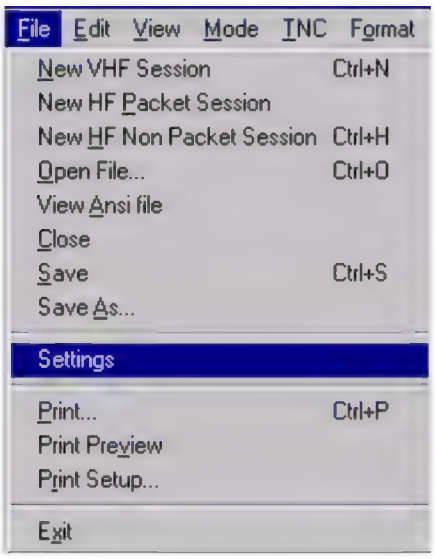
Line Mode: When you select this option, PKTerm '99 will transmit to the TNC every time you hit a carriage return (i.e. the <enter> button) this allows you to wait until you have typed in everything you wish to send before PKTerm '99 sends the data in one big burst.

Using the same example as above The data would be transmitted as follows:

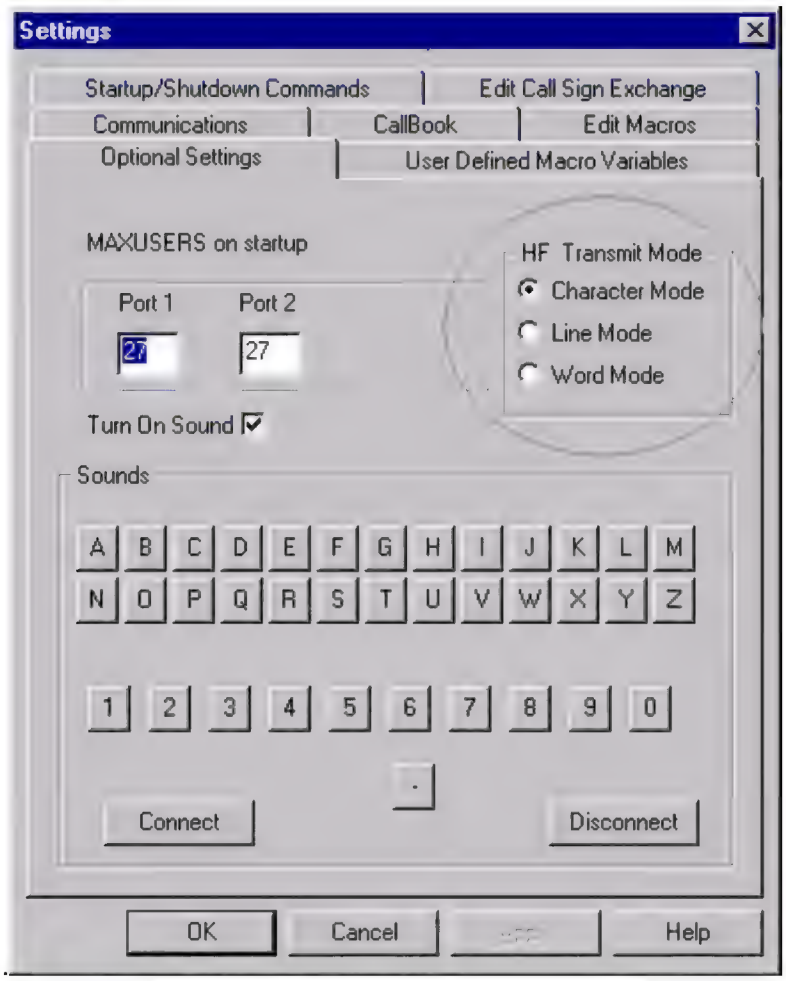
(T)=Transmitted data to TNC

CQ CQ CQ DE N4GDO K. (T)

In order to take advantage of these new features simply go to the PKTerm '99 window and click on the File Menu



After the settings window appears on your screen, simply choose the Optional settings tab at the top of the settings window and you will see the following window.

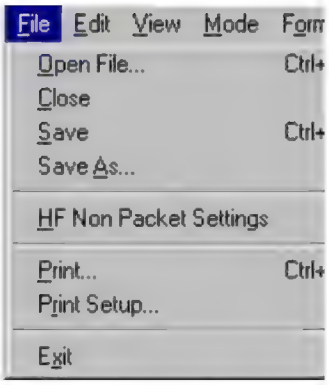


When this screen appears, simply choose the one of the modes found in the upper right portion of the window.

HF File Menu

HF File Menu

This is the HF File Menu. For more information on each option, click on it.



Open File - Use this command to open an existing document, select a document name.

Close - Use this command to close the active session.

Save – Use this command to save the active session to its current name and directory.

Save As – Use this command to save and enter different name for the active session.

HF Non Packet Settings – Allows you to specify specific settings for the different HF Non Packet modes.

Print – Use this command to print a document.

Print Setup – Allows you to set different parameters for printing.

Exit - The Exit command exits and closes from the HF window.

HF Non Packet Settings (Parameters)

Below is a list of the different HF Non Packet modes. Click on each Non Packet mode to see specific settings.

ASCII Settings

Morse Settings

Baudot Settings

NAVTEX Settings

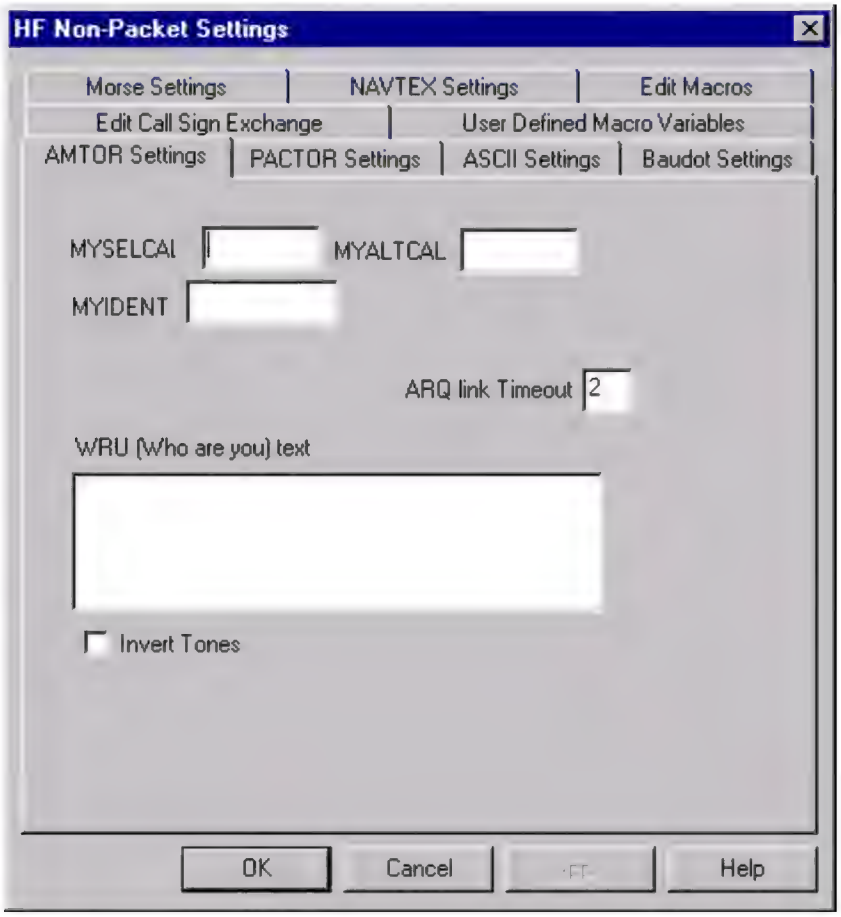
AMTOR Settings

PACTOR Settings

AMTOR Settings

To view the different settings for each mode select the corresponding option tab.

- Insert <CR> - Inserts a carriage return after a user defined number or characters.
- ARQ Link Timeout – This command sets the timeout interval when attempting to link to another station.
- WRU- Who Are You text - This is personal information about yourself.
- Invert Tones - Signals received in Baudot, ASCII, or AMTOR, and signals transmitted using AFSK are inverted.

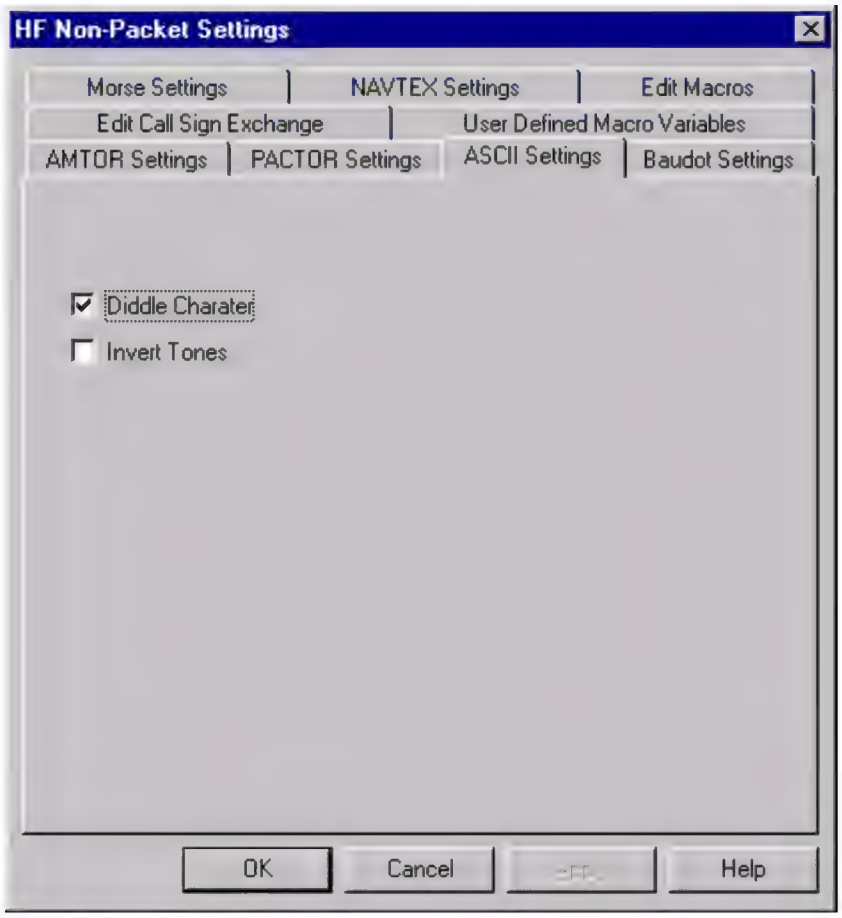


ASCII Settings

- Receive Auto Start – When this is checked, it will receive information only after it has received the MYAUTOST Identifier. It will continue to receive until it receives four "N's" signifying the end of the message, or 30 seconds of no signal.

- Diddle Character – When this is checked, a diddle character is sent when no characters are available from the keyboard or buffer during transmission.

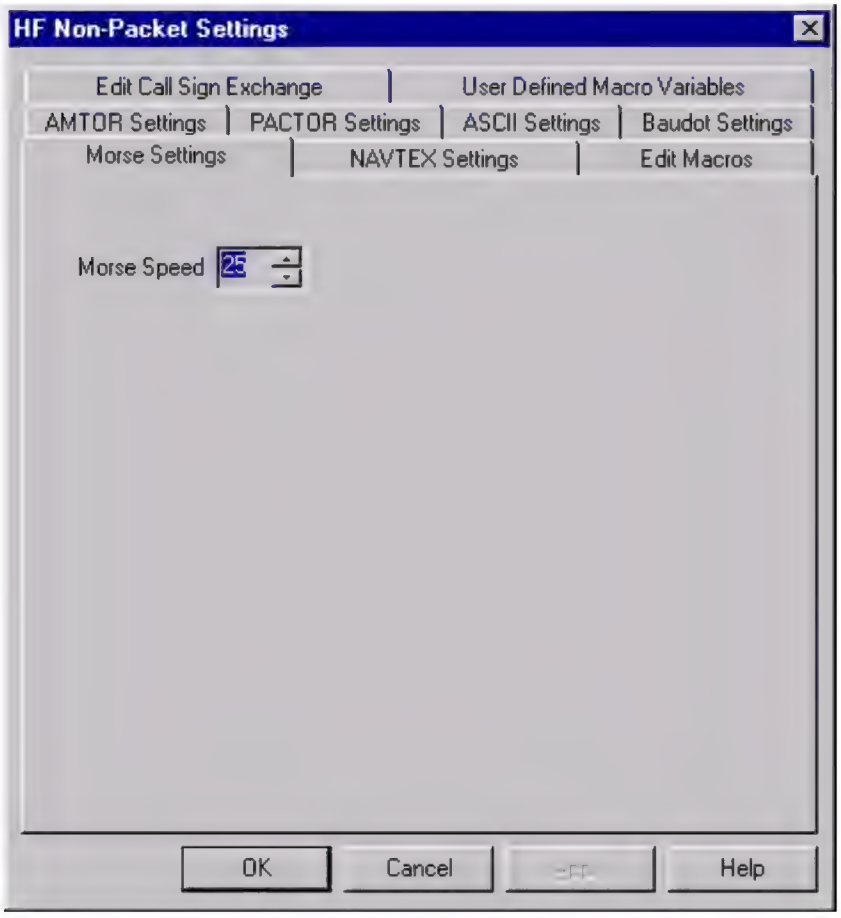
- Invert Tones - Signals received in Baudot, ASCII, or AMTOR, and signals transmitted using AFSK are inverted.



Morse Settings

To view the different settings for each mode select the corresponding option tab.

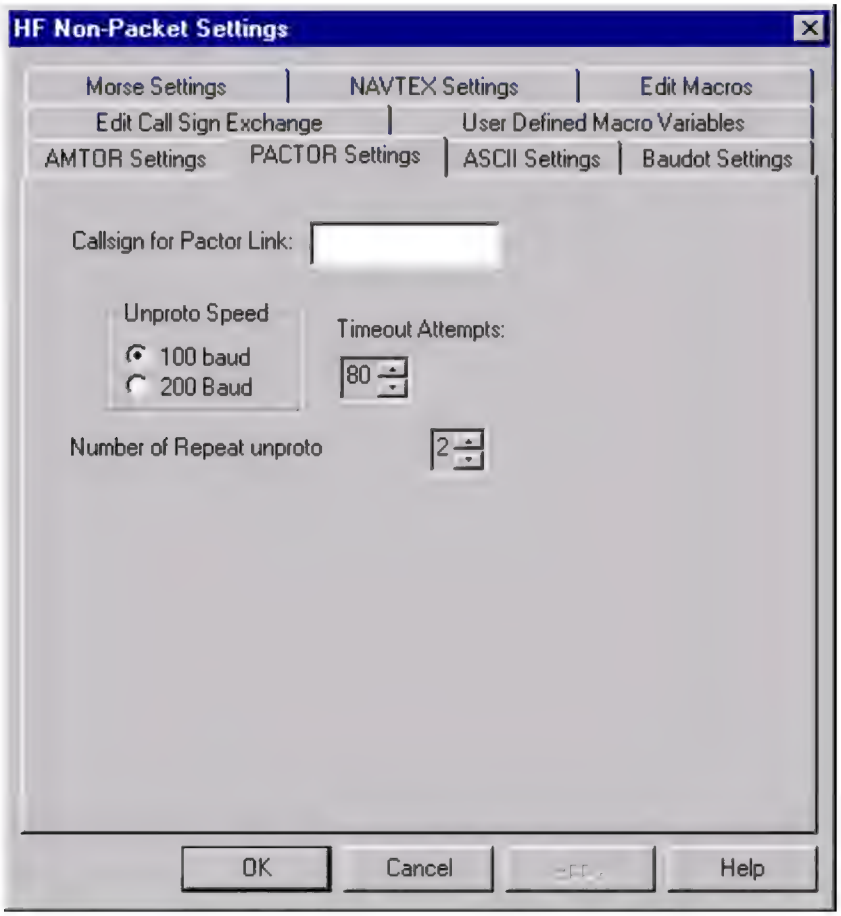
- Mspeed - This command sets the Mspeed used when entering the Morse mode.



PACTOR Settings

To view the different settings for each mode select the corresponding option tab.

- Call Sign for PACTOR Link – Your Call Sign
- Unproto Speed – Speed of non-connected transmissions.
- Timeout- Sets the timeout attempts.
- Number of Repeat unproto messages - Number of times information is transmitted.



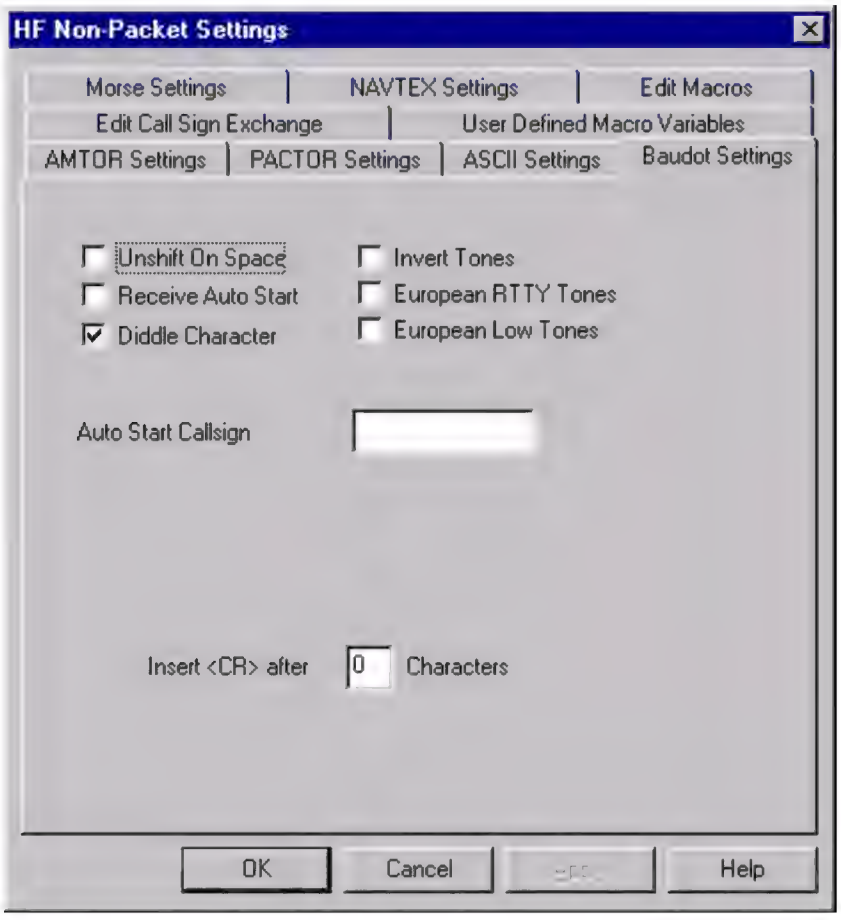
Baudot Settings

To view the different settings for each mode, select the corresponding option tab.

- Unshift On SPACE – When this option is checked an unshift to letters can occur when a SPACE is received.
- Receive Auto Start – When this is checked it will receive information only after it has received the MYAUTOST identifier. It will continue to receive until it receives four "N"s, signifying the end of the message or 30 seconds of no signal.
- Diddle Character – When this is checked a diddle character is sent when no characters are available from the keyboard or buffer during transmission.
- Invert Tones - Signals received in Baudot, ASCII, or AMTOR, and signals transmitted using AFSK are inverted.
- European Baudot - Check here to use the European Baudot code.
- European Low Tones – To use the European MARK and SPACE frequencies, check this Auto Start – When this is checked it will receive information only after it has received the MYAUTOST identifier. It will continue to receive until it receives four "N's" signifying the end of the message,

or 30 seconds of no signal. Shift - This option sets the default shift used. When MODEM is selected MARK and SPACE commands set the frequencies used by adjusting the switch capacitance filters.

- Insert <CR> - Inserts a carriage return after so many characters

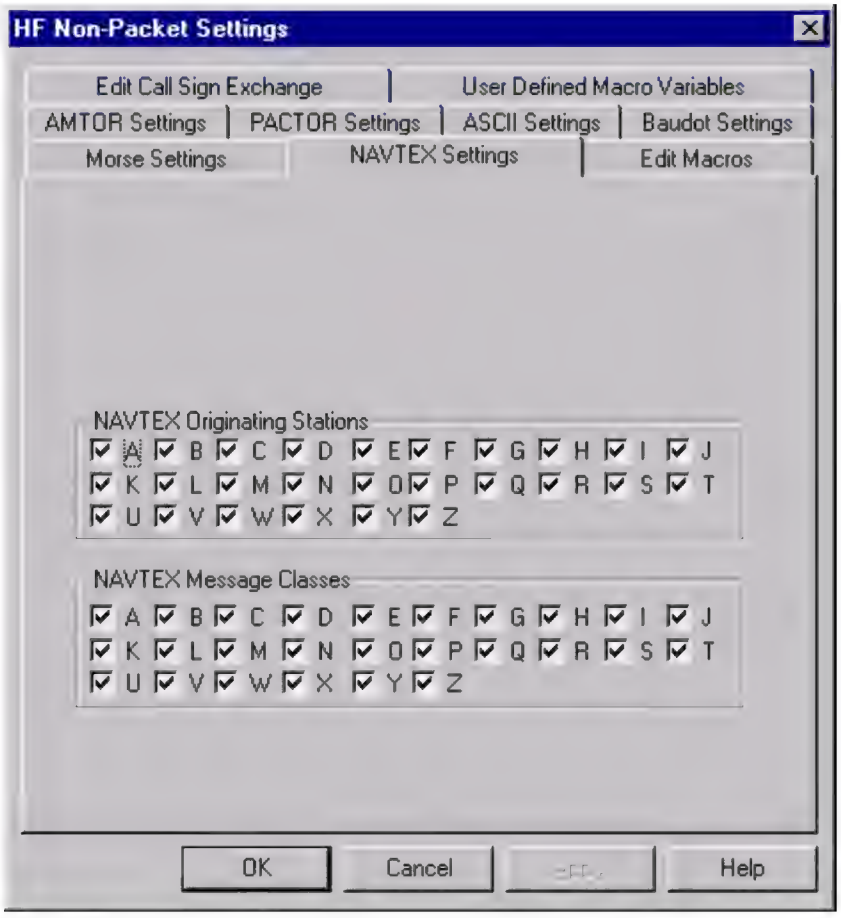


NAVTEX Settings

To view the different settings for each mode, select the corresponding option tab.

- NAVTEX Originating Stations – This command specifies which originating stations will be copied in the NAVTEX mode.

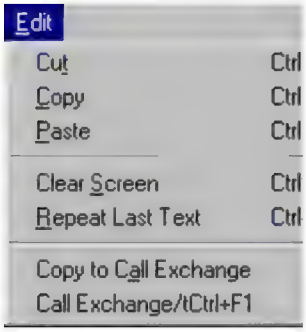
- NAVTEX Message Classes – This command specifies which classes of NAVTEX messages will be sent to the attached terminal.



HF Edit Menu

HF Edit Menu

This is the HF Edit Menu. For more information on each option, click on it.



Cut - Use this command to remove the currently selected data from the

session and put it on the clipboard

Copy - Use this command to copy selected data onto the clipboard.

Paste - Use this command to insert a copy of the clipboard contents at the insertion point.

Clear Screen - Clears the text from the active text window.

Repeat Last Text - Repeats the last text you sent. The text will be put into the active chat window.

Copy To Call Exchange – Allows you to copy the Call Sign you're Communicating into call exchange buffer.

Call Exchange - Takes the Call Sign you have copied with the Copy to Call Exchange and appends it to the information that was created in the settings for call exchange.

Menu of HF View

Menu of HF View

This is the HF View Menu. For more information on each option, click on it.

Toolbar - Use this command to display and hide the Toolbar.

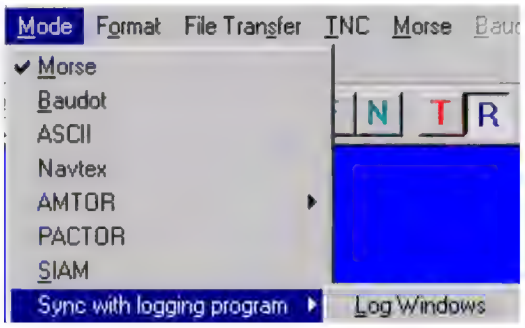
Status Bar – Use this command to display and hide the Status Bar.

(Check mark indicates it is being displayed)

HF Mode Menu

HF Mode Menu

This is the HF mode Menu. For more information on each option, click on it.



Morse – Sets the current HF mode to Morse.

RTTY – Sets the current HF mode to RTTY.

AMTOR – Sets the current HF mode to AMTOR.

PACTOR - Sets the current HF mode to PACTOR.

NAVTEX - Sets the current HF mode to

NAVTEX.

ASCII - Sets the current HF mode to ASCII.

Listen Amtor – Sets the current HF mode to Listen Amtor.

FEC – Sets the current HF mode to FEC.

Morse

Morse is the acronym for continuous wave. Morse is another name for Morse code.

To make a Morse contact you must:

1. First Open a New HF Window from the File Menu.
2. You need to be in Morse mode. To check and see what mode you are in, look at the status bar.
3. To change modes:
   A. Select Morse from the mode Menu.
   B. Click on the  icon in the toolbar
4. Once you are in the correct mode (notice mode in status bar), you need to tune to the Morse signal according to the specifications in your TimeWave TNC Manual.
5. When it is tuned correctly, you will start to see the Morse characters in the text window.
6. Now you are ready to reply or call CQ. There are two ways to accomplish these.
   A. Type data in the chat box and press <Enter>. Pressing <Enter> turns on transmits; it then transmits the data from the chat box, and then switches back to receive automatically.
   B. You can also press  and type your message in the chat box. With this you send one (1) character at a time. Then you must press  to receive. This clears the chat buffer.
7. Now you are ready to call CQ again or receive Morse from another station.

Baudot

To make a Baudot contact you must:

1. First Open a New HF Window from the File Menu.
2. You need to be in Baudot mode. To check and see what mode you in, look at the status bar.
3. There are two ways to change modes:
   A. Select Baudot from the mode menu
   B. Click on the  icon in the toolbar
4. Once you are in the correct mode (notice the mode in status bar), you need to tune to the Baudot signal according to the specifications in your TimeWave TNC Manual.
5. When it is tuned correctly, you will start to see the Baudot characters in the text window.
6. Now you are ready to reply or call CQ. There are two ways to accomplish these.
   A. Type data in the chat box and press Enter. Pressing Enter turns on the transmitter. It then transmits the data to the TNC, and then switches back to receive automatically.
   B. You can also press  and type your message in the chat box. With this you send one (1) character at a time. Then you must press  to receive. This clears the chat buffer.
7. Now you are ready to call CQ again or receive Baudot from another station.

ASCII

To connect using ASCII:

1. First Open a New HF Window from the File Menu.
2. To change modes:
   A. Select ASCII from the mode menu
   B. Click on the  icon in the toolbar
3. Once you are in the correct mode (notice the mode in status bar) you need to tune to the ASCII signal according to the specifications in your TimeWave TNC Manual.
4. When it is tuned correctly, you will start to see the ASCII characters in the text window.
5. Now you are ready to reply or call CQ. There are two ways to accomplish these.
   A. Type data in the chat box and press Enter. Pressing <Enter> turns the transmitter on. It then transmits the data to the TNC, and then switches back to receive automatically.

B. You can also press  and type your message in the chat buffer. With this, you send one (1) character at a time. Then you must press  to receive. This clears the chat buffer and turn off the transmitter.

6. Now you are ready to call CQ again or receive ASCII from another station

NAVTEXt

NAVTEXT is transmitted with mode B AMTOR (FEC). NAVTEXT is sent with a unique message format to identify the sending station, the type of message, and the message sequence number. NAVTEXT is a receive only mode.

1. First Open a New HF Window from the File Menu.
2. You need to be in NAVTEXT mode. To check and see what mode you are look at the status bar.

3. There are two ways to set the mode.

A. Select NAVTEX from the mode Menu.

A. Click on the  icon in the toolbar.

Once you are in the correct mode (notice the mode in status bar), you need to tune to the NAVTEXT signal according to the specifications in you TNC manual.

AMTOR

There are two basic modes for AMTOR operation. Mode A operation is called ARQ. ARQ is a one-to-one mode, meaning you are allowed to communicate with only one station at a time. Mode B operation is called FEC. This mode is similar to RTTY. Unlike ARQ, FEC is a continuous broadcast.

To make an AMTOR contact you must:

1. First Open a New HF Window from the File Menu.
2. You need to be in Listen AMTOR mode. To check and see what mode you are in, look at the status bar.

3. To change modes:

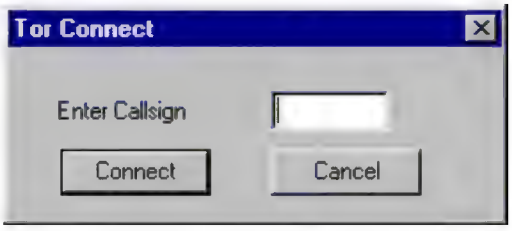
To connect to mode A:

A. Select Listen AMTOR mode from the mode menu.

B. Click on the L icon. Tune to the AMTOR signal according to the specifications in your TimeWave TNC Manual.

C. Click on the A if you want to call CQ. Then press the "T" to turn on the transmitter.

D. To link to another station, you need to select Link from the AMTOR menu or press LK. Link will bring up a connect box and you need to enter the SELCAL of the station you want to connect to.



E. To Call a CQ:

1. Type data in the chat buffer and press Enter. Pressing Enter turns on transmit. It then transmits the data to the TNC and then switches back to receive automatically.

2. You can also press T, and type your message in the chat box. With this you send one (1) character at a time. Then you must press R to receive. This clears the chat buffer.

F. To disconnect, select the disconnect option from the AMTOR menu or press D.

To connect to mode B:

A. Select FEC mode from the mode menu

B. Click on the F icon in the toolbar

C. Once you are in the correct mode (notice the mode in status bar), you need to tune to the FEC signal according to the specifications in your TimeWave TNC Manual.

D. When it is tuned correctly, you will start to see the FEC characters in the text window.

E. Now you are ready to reply or call CQ. There are two ways to accomplish these.

1. Type data in the chat box and press Enter. Pressing Enter turns on transmitter. It then transmits the data to the TNC and then switches back to receive automatically.

2. You can also press  and type your message in the chat buffer. With this you send one (1) character at a time. Then you must press  to receive. This clears the chat buffer and turns off your transmitter.

F. Now you are ready to Call CQ again or receive FEC from another station.

Listen AMTOR

Listen AMTOR allows you to tune to an ARQ signal without being part of the link. From Listen AMTOR you are able to display the text, but no error correction takes place.

To Connect to Listen AMTOR.

1. First Open a New HF Window from the File Menu.

2. There are two ways to select the mode.

A. Select LAMTOR from the mode menu

B. Click on the  icon in the toolbar Tune to the AMTOR signal according to the specifications in your TimeWave TNC Manual.

3. Once you are in the correct mode (notice the mode in status bar), you need to tune to the Listen AMTOR signal according to the specifications in your TimeWave TNC Manual.

This option places the TNC in the Listen AMTOR mode. The TNC will receive FEC, SELFEC, or ARQ Signal and will not transmit when in LAMTOR mode. You can link to a station in LAMTOR mode. Press the  button and type in the Call Sign. PK-Term '99 will set the TNC into AMTOR mode to make the connection.

FEC

FEC is the acronym for Forward Error Correction. This is mode B in AMTOR.

To connect to FEC (mode B).

1. First Open a New HF Window from the File Menu.

2. To change modes:

A. Select FEC from the mode menu

B. Click on the  icon in the toolbar.

3. Once you are in the correct mode (notice mode in status bar) you need to tune to the FEC signal according to the specifications in your TimeWave TNC Manual.

4. When it is tuned correctly you will start to see the FEC characters in the text window.

5. Now you are ready to reply or call CQ. There are two ways to accomplish these.

   A. Type data in the chat box and press Enter. Pressing Enter turns the transmitter on. It then transmits the data to the TNC and then switches back to receive automatically.

   B. You can also press  and type your message in the chat buffer. With this you send one (1) character at a time. Then you must press  to receive. This clears the chat buffer.

   6. Now you are ready to Call CQ again or receive FEC from another station

PACTOR

PacTOR uses a handshaking system to send data. An ACK acknowledgement is sent when data is received intact and a NAK is sent for corrupted data.

1. First Open a New HF Window from the File Menu.

2. You need to be in PACTOR mode. To check and see what mode in, you are look at the status bar.

3. There are two ways to change modes:

   A. Select PACTOR from the mode Menu.

   B. Click on the  icon in the toolbar

4. Once you are in the correct mode (notice mode in status bar), you need to tune to the PACTOR signal according to the specifications in your TimeWave TNC Manual.

5. When it is tuned correctly, you will start to see the PACTOR characters in the text window

6. Now you are ready to request a link or call CQ.

7. To connect select the PACTOR Connect option from the Packet Menu, and then type in the Call Sign you want to connect to and press Connect. To change from IRS to ISS use the appropriate button.

8. To call CQ you need to press T and type your message in the chat buffer. This will send one (1) character at a time. Then you must press R to receive. This clears the chat buffer.

To disconnect select PACTOR Disconnect.

Format Menu

File Transfer Menu

HF File Transfer Menu

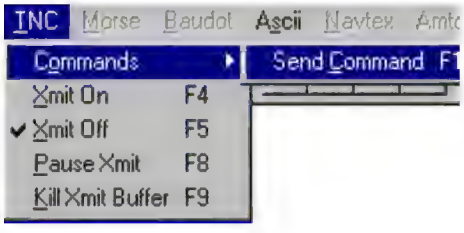
This is the HF File Transfer Menu.

Send ASCII - Sends an ASCII file with no protocol.

HF TNC Menu

HF TNC Menu

This is the HF TNC Menu. For more information on each option, click on it.



Commands – These are some commands available in HF for the TNC.

Xmit On - Turns the transmitter on.

Xmit Off - Turns the transmitter off.

Pause Xmit - Returns to receive mode immediately in FEC.

Kill Xmit Buffer - This stops the

transmission and clears out the TNC transmit buffer.

Transmit On

Turns the transmitter on in a non-linked mode. There are three ways to turn Transmit On:

A. Select the  icon.

B. Press F4.

C. Select Transmit On from the HF TNC Menu.

Transmit Off

Turns the transmitter off in a non-linked mode. There are three ways to turn Transmit off:

A. Select the  icon to change from Transmit to Receive.

B. Press F4 or F5.

C. Select Transmit Off from the HF TNC Menu.

Pause Xmit

Pause Transmit Option. Returns to receive mode immediately in FEC. Characters still in the TNC transmit buffer will remain there.

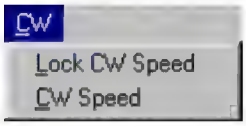
Kill Xmit Buffer

Kill Transmit Buffer. This stops the transmission and clears out the TNC transmit buffer.

Morse Menu

Morse Options

These are the Morse Commands. For more information on each option, click on it.



Lock Morse Speed - Lock Morse Speed causes the TNC to lock the Morse transmit speed to the speed of the Morse signal begin received.

Morse Speed - This command sets the Mspeed used when entering the Morsemode.

Lock Morse Speed

Locks Morse Speed causes the TNC to lock the Morse transmit speed to the speed of the Morse signal being received.

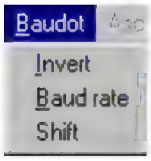
Morse Speed

This sets the speed in words per minute for sending Morse. The Morse speed must be between 5 wpm and 99 wpm.

Baudot Menu

Baudot Options

This is the RTTY pull down menu. For more information on each option, click on it.



Invert - Signals received in Baudot, ASCII, or AMTOR, and signals transmitted using AFSK are inverted.

Baud Rate - This sets the baud rate for each non-packet mode.

Shift Tone (RTTY – ASCII - AMTOR) - Sets the default shift used in RTTY, ASCII, AMTOR, NAVTEX, and PACTOR modes.

Invert (Baudot - ASCII)

Signals received in Baudot, ASCII, or AMTOR, and signals transmitted using AFSK are inverted.

Baud Rate

This sets the baud rate for each non-packet mode.

For RTTY you have these options: from 45-300 baud rate.

For PACTOR you have these options: 100, 200, and Auto.

For AMTOR you have these options: 100, 200, 300, and Auto.

Shift Tone (Baudot - ASCII_AMTOR)

Sets the default shift used in Baudot, ASCII, AMTOR, NAVTEX, and PACTOR modes.

Ascii Menu

ASCII Options

These are the ASCII Commands. For more information on each option, click on it.

Invert - Signals received in Baudot, ASCII, or AMTOR, and signals transmitted using AFSK are inverted.

Baud Rate - This sets the baud rate for each non-packet mode.

Shift Tone (Baudot – ASCII – AMTOR) - Sets the default shift used in Baudot, ASCII, AMTOR, NAVTEX, and PACTOR modes.

Navtex Menu

NAVTEX Options

These are the NAVTEX Commands. For more information on each option, click on it.

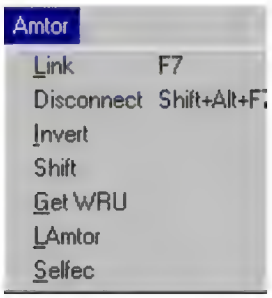
Invert - Signals received in Baudot, ASCII, or AMTOR, and signals transmitted using AFSK are inverted.

Shift Tone (Baudot – ASCII – AMTOR) - Sets the default shift used in Baudot, ASCII, AMTOR, NAVTEX, and PACTOR modes.

Amtor Menu

AMTOR Options

This is a list of the AMTOR Commands. For more information on each option, click on it.



Link – Links to an AMTOR station.

Disconnect – Disconnects from an AMTOR station.

Invert - Signals received in Baudot, ASCII, or AMTOR, and signals transmitted using AFSK are inverted.

Shift Tone (Baudot – ASCII - AMTOR) - Sets the default shift used in Baudot, ASCII, AMTOR, NAVTEX, and PACTOR modes.

Get WRU – Who Are You text. Gets personal information from TNC

LAMTOR – Listen Amtor

SELFEC – When SELFEC is selected PK-Term '99 will begin a mode B SELFEC broadcast.

AMTOR Link

The AMTOR Connect command connects to a packet station depending on the Call Sign entered

AMTOR Disconnect

The AMTOR Disconnect command disconnects from a packet station.

Get WRU

Who Are You text. Gets personal information from other TNC.

LAMTOR

To connect using Listen AMTOR.

1. First Open a New HF Window from the File Menu.
2. There are two ways to select the mode.
   B. Select LAMTOR from the mode menu.
   C. Click on the  icon in the toolbar. Tune to the AMTOR signal according to the specifications in your TimeWave TNC Manual.
3. Once you are in the correct mode (notice the mode in status bar), you need to tune to the Listen AMTOR signal according to the specifications in your TimeWave TNC Manual.

This option places the TNC in the Listen AMTOR mode. The TNC will receive FEC, SELFEC, or ARQ Signal and then will not transmit when in LAMTOR mode. You can link to a station in LAMTOR mode. Press the button and type in the Call Sign. PK-Term '99 will set the TNC to AMTOR standby mode to make the connection.

Listen AMTOR allows you to tune to an ARQ without being part of the link. From Listen AMTOR you are able to display the text, but no error correction takes place.

This option allows you to upload ASCII files while connected to another station. To send an ASCII file, when you choose this option, you will be presented with a dialog box asking you for the filename. Chose the filename and press OK. The file will then be transferring at 256 bytes at a time. To abort the transfer, click on the button or choose the stop transfer menu option.

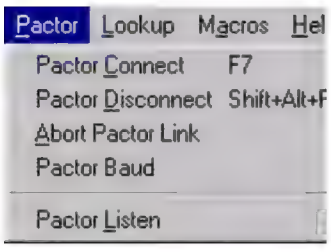
SELFEC

When you pick this option, PK-Term '99 will begin a mode B SELFEC broadcast. You will be presented with a window requiring you to enter the SELCAL. Enter the SELCAL and press OK. This will turn the transmitter on and send the SELCAL as the preamble to a transmission, followed by any text you type into the chat window. To return to Receive mode, click on R or press F5. At this time, you will only be able to receive SELFEC transmission, To receive any FEC transmission, press F10 and type auto-start off. To send another SELFEC broadcast, select the SELFEC menu option.

Pactor Menu

PACTOR Options

These are the PACTOR Commands. For more information on each option, click on it.



PACTOR Connect –The PACTOR Connect command connects to a packet station depending on the Call Sign entered.

PACTOR Disconnect - The PACTOR Disconnect command disconnect from a packet station

Abort PACTOR Link – Aborts a link in progress.

PACTOR Baud – Sets the baud for PACTOR.

Shift - sets the Shift of the PACTOR signal.

PACTOR Listen – Selecting this menu option puts the TNC in PACTOR Listen mode.

PACTOR Connect

The PACTOR Connect command connects to a packet station depending on the Call Sign entered.

PACTOR Disconnect

The PACTOR Disconnect command disconnects from a packet station.

Abort PACTOR Link

Chose this option during the link phasing process if you wish to abort the link. Once chosen, the current link attempt will be aborted.

PACTOR Baud

This is used to set the speed to be used for a PACTOR FEC (non-linked) connection. When set to 100, all FEC transmissions will be at 100 baud, and when set to 200, FEC transmissions will be at 200 baud.

PACTOR Listen

Selecting this menu option puts the TNC in PACTOR Listen mode. This mode will allow you to copy FEC or ARQ (Linked) PACTOR stations, but you cannot transmit from this mode. You can link to a station by clicking on the  button, which returns to PACTOR mode. To exit PACTOR Listen mode, uncheck the menu item or click on the  button again.

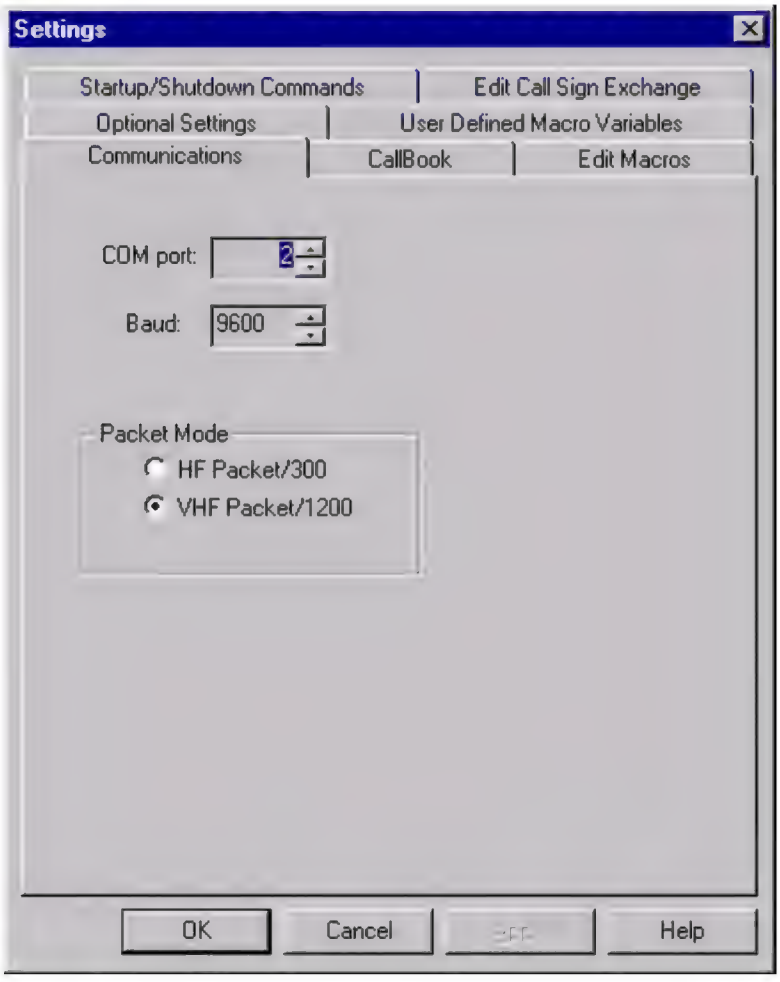
HF Packet Session

If you want to connect to HF Packet, there are several things you will need to know to help you out. When using a AEA/TimeWave TNC, you will only be able to use a PK-232, DSP-232, DSP-1232, PK-900, and DSP-2232

PK-232, DSP-232, DSP-1232

When using a One of these TNCs, you must remember that these TNCs only have one Radio port for Packet communication. Because of this, when you wish to start a HF packet session, you must do a couple things first. First you must make sure that the HF non-packet session window of

PKTerm '98 is closed. Secondly go to the File menu, choose settings and then click on the communications tab at the top of the window that appears. As you can see in this picture you will see a section on the bottom of this screen that allows you to select HF or VHF packet session.



Once you have selected the mode for HF Packet, you will have to restart PKTerm '99 for the change to take affect. Once the HF session is open you use the Packet window in the same way as the VHF Packet.

PK-900 or DSP-2232

If you are using any of these TNCs then you will not have to change any settings or restart the computer. Because these TNCs use Radio Port 1 for HF and VHF Packet, all you have to do is shut down the HF-non packet session window if it is open, then choose the File menu and choose New HF Session. Once the HF session is open you use the HF Packet window the same as the VHF Packet.

DSP-232, DSP-1232, PK-900, DSP-2232

For these TNCs, you also have the option to changing the HF Packet modem in the modem selection list. For more information on changing the modem for HF Packet or any other mode, see the Modem section here

Log Windows Interface

PK-Term '99 provides a TNC interface for Log Windows Version 2.0. Data being received or echoed by the TNC can be sent to Log Windows. Likewise data typed in the Log Windows transmit window (in the form of a macro.) PK-Term '99 acts as a data engine for Log windows. One of PK-Term '99's user port windows can be redirected to the Log Windows TNC Window, allowing full two way communications between Log Windows and a TNC through PK-Term '99. For Example, if you are using a dual port TNC such as TimeWave's PK-900 and PK-Term '99 you May, 99

1. Redirect TNC Port 2 which is VHF Packet for use with Log Windows.
2. Use TNC Port 1 for other HF digital Modes.

As you can see, you may enjoy the benefits of true dual port operating while sharing the power of PK-Term '99 and Log Windows. Log Windows 2.0 or greater is required. All PK-Term '99 functions are still enabled while communicating with Log Windows.

Synchronizing PK-Term '99 with Log Windows

PK-Term '99 must first become aware that Log Windows is running. To do this:

1. Get both programs running.

2. Select the Mode Menu and choose Sync with Logging Program, then choose Log Windows.

Once you have Synced PK-Term '99 and Log Windows simply minimize PK-Term '99 and you can communicate with the TNC using Log Windows. For more information on using Log Windows, consult the Log Program documentation.

DX4WIN

In order to use DX4WIN with PKTerm '99 you must first set up DX4Win to recognize PKTerm '99.

To setup DX4WIN simply:

1) Open DX4WIN.

2) Click on the File Menu at the top of the window.

3) Choose Preferences.

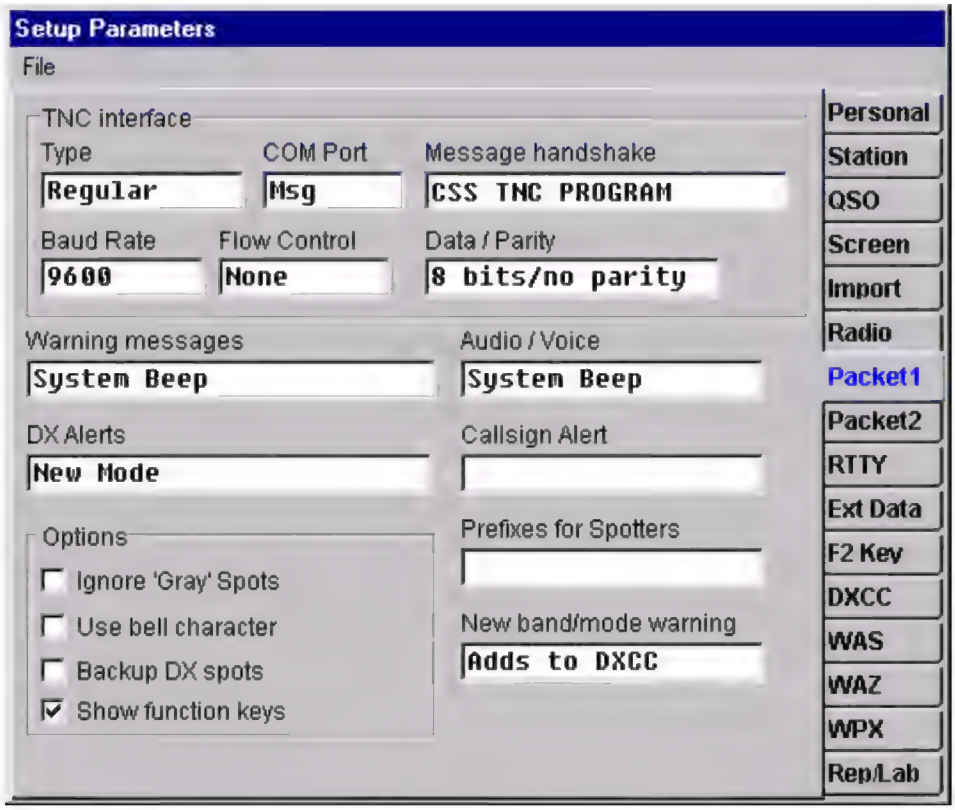
4) A window that says 'setup parameters' should appear. On the right side of the window you should see about 16 tabs. Choose the tab that says **packet1**

5) At the top of the window under the TNC interface section type the following in:

- Type : Regular
- COM Port: Msg
- Message Handshake: CSS TNC PROGRAM |PKTerm '99

Important: **MESSAGE HANDSHAKE MUST TYPED EXACTLY AS YOU SEE IT HERE!!!**

In the above message the | character before PKTerm '99 is called a 'Pipe' and is located above the \ key on your keyboard (on the keyboard it looks like a stretched out colon).



6) Click on the File Menu and choose save changes.

Now DX4WIN is ready for use with PKTerm '99. Simply load PKTerm '99 and DX4WIN at the same time and click on the 'sync with DX4WIN button on the toolbar. <<<*insert icon here*>>>>

Or click on the Mode Menu at the top of the PKTerm '99 window and choose sync with logging program and then choose DX4WIN.

Logging Programs

Starting with PKTerm '99 Version 1.3, you can sync a PKTerm session window with a Log Windows. With Version 1.4 of PKTerm '99 you may also sync with DX4WIN.

Syncing with a logging program can be very useful when doing contests and saving QSOs. Using a logging program like DX4WIN or Log Windows helps simply connecting and navigating a DXCluster

Getting started with Rig Control

Starting in Version 1.4 of PKTerm '99, a basic form of Rig control has been included to make your life easier while surfing the airwaves and using PKTerm '99. The design of the Rig control option in PKTerm '99 was intended to be intuitive and second nature, so you will no longer have to keep scooting around your shack going from the computer to the radio to change frequencies and then back to the computer again. Hey, if you had a long enough serial cord and a laptop, you could even make contacts while you're watching your favorite shows in the living room!!

Before we get started you will need to make sure you have all the things required to use the Rig Control Feature.

1) A transceiver that is on the compatibility list below. (This is just a preliminary list. Newer versions of rig control will support more transceivers.)

2) A RS-232 Interface for Rig Control that is compatible with your Transceiver

3) A computer with two open serial ports (1 for the TNC and 1 for the RS-232 interface.)

NOTE: THE RIG CONTROL SOFTWARE IS IN PREVIEW. IF YOU EXPERIENCE ANY PROBLEMS WITH IT PLEASE COMMUNICATE THEM TO RIGCONTROL@CSSINCORP.COM

Transceiver Compatibility list:

Manufacturer	Model	Manufacturer	Model
Alinco:	DX-77	Ten-TEC:	535
ICOM:	IC-707	Ten-TEC:	536
ICOM:	IC-725	Ten-TEC:	563
ICOM:	IC-726	Ten-TEC:	564

ICOM:	IC-728	Ten-TEC:	OMNI-VI
ICOM:	IC-729	Yaesu	FT-1000
ICOM:	IC-735	Yaesu	FT-757GX
ICOM:	IC-736	Yaesu	FT-840
ICOM:	IC-737	Yaesu	FT-900
ICOM:	IC-738	Yaesu	FT-990
ICOM:	IC-751A		
ICOM:	IC-756		
ICOM:	IC-761		
ICOM:	IC-765		
ICOM:	IC-781		
Kenwood:	TS-450S		
Kenwood:	TS-50S		
Kenwood:	TS-690S		
Kenwood:	TS-850		
Kenwood:	TS-950S		

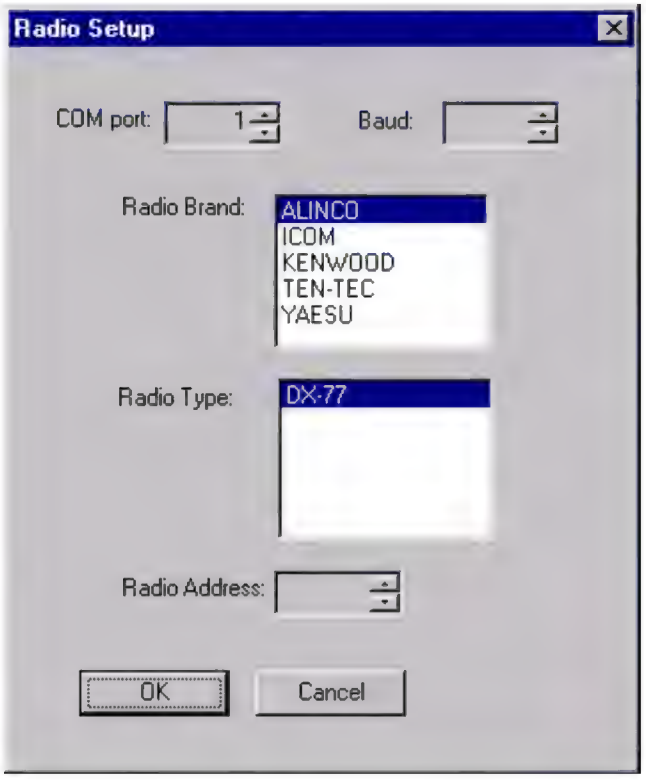
Click Here to see how to setup Rig control

Setting up Rig Control

Now that you've got everything you need to take advantage of rig control. All you have to do to set it up is plug the RS-232 Interface into your rig and then plug the other end of the RS-232 Interface into your open serial port. Once the hardware is setup, just load the rig control program. The first time you load the rig control program you should see a screen telling you that you need to configure it for your computer and rig. The screen should look like this.

Once you see this window just click on the 'ok' button to proceed to the next screen.

The next window you will see will be the actual settings screen. If you ever have to change a setting this is where you will do so.



First thing to do is to select the COM port that the rs-232 interface for your rig is connected to. For most people it will be either COM 1 or COM 2 since these are usually the 2 external serial ports on a computer. Be warned though that people using a serial mouse will either have to have a PS/2 mouse or obtain an additional external serial port.

The second thing you will need to do on this settings screen is to select the baud rate of the serial port you are on. The default speed for communications (COM) ports in windows 95/98 is 9600.

If you think your settings might have gotten changed or you are not 100% sure of the speed of your COM ports then here is a simple way to verify the speeds on your computer.

Step One- From the desktop, right click on my computer

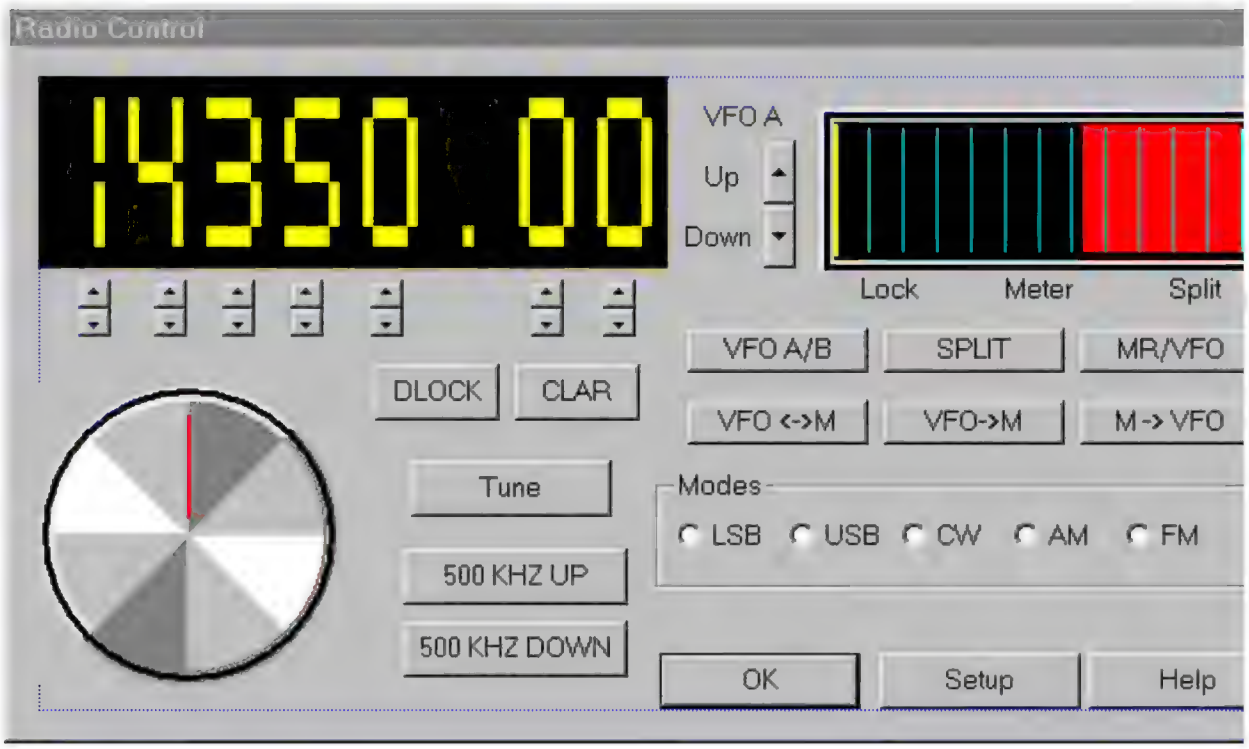
Step Two - Go down and select Properties. Then click on the device Manager.

Step Three - Scroll down the list of hardware on you computer until you see the Ports section. Click the plus (+) sign next to it. You should see a list of the installed communications ports on your computer. Left click one time on the port you will be using for Rig control and then click on the properties button at the bottom of the window.

Step Four - You should see a new window that has 4 tabs at the top of it. The 2nd tab in Windows 95 and the 3rd tab in windows 98 should say port settings. Click on this tab. Now the first item under the port settings tab should be the baud rate. It should say 9600 but if for some reason it is different, just remember what it is and use that number in the baud rate setting of the Rig Control Setup.

Using Rig Control

Now that you've got the Rig control set up you can have lots of fun without having to keep reaching over and tuning the radio manually. Once you have the Rig Control software setup, you should see this screen when you run Rig Control.



Starting off at the top of the window you should see the big box with the numbers in it. That is the frequency that the radio is set to. If you look at your radio when this window pops up you should see it is set to this frequency.

There are several ways to tune the radio. For general tuning you can use the circle with the red line to tune quickly to a different frequency. This lets you tune faster but it is harder to fine tune to a specific frequency. Once you get into the general area of where you want though simply use the up and down arrows found below the numbers at the top.

If you're interested in changing bands then you can click the '500 KHZ up' or the '500 KHZ DOWN' button to raise or lower the frequency by 500 khz with the push of a button.

The Modes simply let you change the radio between Upper Side Band (USB), Lower Side Band (LSB), CW, AM, or FM.

DLOCK locks the dial so you can not tune with the dial on the radio. You can still tune with the Rig control software though.

TUNE- an Antenna Tuner.

UP and DOWN- depending on the radio these buttons will either switch up and down a band or change the frequency up or down 100 khz.

CLAR- is a clarifier. When this button is pressed, you can tune and change bands to change the receiving frequency without changing the transmitting frequency. When the button is unpressed then the receiving frequency changes back to the original frequency.

NOTE: NOT ALL RADIOS WILL SUPPORT ALL OF THESE FUNCTIONS. FOR MORE INFORMATION ON YOUR RADIO'S FUNCTIONS PLEASE CONSULT YOUR RADIO'S MANUAL.

When you're done using the rig control simply press the ok button at the bottom of the window to close it out. To change the settings for the Rig Control (I.E baud rate or COM port) click on the setup button. This will take you back to the same setup screen you saw when you first setup the rig control feature. For more information on setting up rig control or changing you settings please see the setting up Rig Control Section of this help file

Underneath the Red and black bar at the upper-right hand corner of the rig control window you will notice a group of buttons. These buttons are VFO A/B, SPLIT, MEMO, VFO->M, AND M->VFO.

- VFO A/B – Pressing this button causes the frequency data in the VFO A and VFO B registers to be exchanged. If this button is pushed again then the frequency data will be exchanged again, returning it to it's original frequency.
- SPLIT – Pressing this button enables split frequency operation, letting you switch from simplex to duplex operation. The frequency shown will be the receiving frequency until you key the mike and then the frequency shown will be changed to the transmitting frequency.
- VFO->M - This key writes the frequency data from the selected VFO into the last selected memory channel.
- M->VFO – This button writes the frequency data from the last selected memory channel into the last selected VFO. The memory data remains unchanged in the memory, but previous data in the VFO is overwritten.

Troubleshooting

To troubleshoot your TNC first make sure it works with Windows Terminal. To do this set COM port and baud rate in HyperTerminal and turn your TNC on. You should then see a

command prompt on your screen if the computer is in terminal mode or you will see some other characters on your screen.

If you were unable to establish communications with your TNC using PK-Term '99 use the terminal program titled HyperTerminal, located under Start, Programs, Accessories, to determine whether or not your TNC is talking to the serial port. Once the TNC is operational with HyperTerminal, you can go back and troubleshoot installing PK-Term '99. (Alternatively, you may choose to go to DOS and use Pack Rat Lite for DOS that was shipped with your TNC (This is not PK-Term '99) to establish that your computer and TNC are working together over the serial port.)

If you choose to use HyperTerminal, you will have to set up a program name, the COM port, and baud rate for your TNC. Bring up HyperTerminal by clicking on Start, Programs then Accessories, and selecting HyperTerminal program.

It will initially ask you for a name (this is a name of the configuration you will make to test your TNC). Enter a name such as TEST and click on OK. Next select the COM Port (e.g. COM 1) that your TNC is attached to and click

OK again. Then select 9600 as your terminal baud rate and click on OK. NOTE: These are the only parameters you will need to enter or change. Then press Enter.

At this point you may see the command prompt, which means that your TNC is in Terminal mode, the right serial port and baud rate has been selected, and you are able to communicate with it. Or, you may see a few characters, which means the TNC is responding in Host mode. If you don't see anything at this point, turn the TNC off and then back on, and if you now see several odd characters you are in Host mode, indicating that the TNC is working.

If only garbage-like characters are displayed, the right serial port has been selected, but the baud rate selected is not correct. Return to the setting screen, and select a different baud rate.

If nothing is displayed when the TNC is turned off and back on, the serial port selected may be wrong. Return to the setting screen, and try a different serial port selection.

Make sure the COM port selected is working correctly. If HyperTerminal works OK to communicate through the selected COM port to the TNC, PK-Term '99 should also work.

If HyperTerminal can not communicate with the TNC, make sure the serial cable is connected properly, and the TNC is turned on.

Make sure the serial port selected is not one that is already in use by another device like a mouse or modem. Windows manages the COM port for these types of devices and will not allow proper operation of a TNC and PK-Term '99.

1. Application Errors are cause by a 'pointer gone astray'. Many times, this could mean bad memory, a bad spot on the hard disk or Windows 95 in some unknown state. When this happens, make sure your C:\Windows\Temp directory on the hard disk has been cleaned out, and you've run ScanDisk. Details on how to do this are in the Windows 95 online help.

2. Getting an Error During Startup. If you get any of the startup errors that a documented elsewhere in this help (MON001, STAMP001, etc) that normally means there is a communication problem between PK-Term and your TNC. Make sure your COM port and baud rate in PK-Term 98 match that that the TNC is on, and also make sure the COM port your TNC is on has no IRQ conflicts.

3. Scrolling text on the screen is erratic or letters appear 'behind' the splitter bar. On some video cards with some fonts, this may happen. To fix it, adjust the size of the splitter windows by moving the splitter bar up and down to the size you want. PK-Term '99 will then save that information.

4. If you cannot see the extended ASCII characters (i.e. box characters) on the screen, pick a font (Like the "Video Terminal Screen" font) that supports the OEM character set. In the next release, we will be providing you with access to a Symbol font that supports this.

Some Error Messages that may occur during startup:

NU01 – Error, trying new user mode. This is a message that all attempts to communicate with the TNC have failed.

MYCALL01- TNC didn't return MYCALL status after PK-Term '99 sent the MYCALL <Call Sign> command.

MYCALL02 -TNC didn't return MYCALL status after PK-Term '99 sent the MYCALL <Call Sign> command after finding the MYCALL didn't match the Call Sign in the PK-Term '99 ini file

MON01- TNC didn't return MONITOR status after PK-Term '99 sent the MONITOR ON command

MCOM01-TNC didn't return MCOM status after PK-Term '99 sent the MCOM ON command

MCON01-TNC didn't return MCON status after PK-Term '99 sent the MCON ON command

STAMP01 -TNC didn't return CSTAMP status after PK-Term '99 sent the CSTAMP ON command

XECH001 -TNC didn't return XMITECHO status after PK-Term '99 sent the XMITECHO ON command

STA001 - TNC didn't return STATUS, status after PK-Term '99 sent the STATUS command

Technical Support

If you need more information on Windows, please consult Windows Help .

You can also check our web site for information. Our web site is http://www.cssincorp.com/.

Also check http://www.TimeWave.com.

Email problems with PK-Term98's documentation to docmaster@cssincorp.com

If you need more information on your TNC, please consult your TimeWave TNC Owners Manual.